

The Mining Journal

RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 1352.—VOL. XXXI.

London, Saturday, July 20, 1861.

STAMPED.....SIXPENCE.
UNSTAMPED..FIVEPENCE.

M R. JAMES CROFTS, SHAREBROKER,
No. 1, FINCH LANE, CORNHILL. (Established 17 years.)
Mr. Crofts has FOR SALE—500 Unity Fire, and 200 "State" Fire.
Mr. Crofts is a BUYER of shares in the following mines (cash on receipt of transfer, or exchanges made for other shares)—Bryndown Hall, Herward United, Great Martha, East Caradon, West Frances, Great South Tolpuddle, Providence Mines, St. Ives, Carn Brea, West Caradon, East Bassett, Tamar Silver-Lead, Herdfoot, Bedford United, Cook's Kitchen, Wheal Norris, West Sharp Tor, Marks Valley, Dolcoath, West Seton, Wheal Harriet, Wheal Uny, East Wheal Grenville, Tincroft, North Robert, Ding Dong.

* Holders of mining shares difficult of sale in the open market may hear of purchasers by applying to Mr. Crofts.

M R. JAMES LANE, No. 44, THREADNEEDLE STREET,
LONDON, E.C.

JAMES LANE has FOR SALE, at net prices:—20 Alfred Consols, 30s.; 10 Ashburton United, £10 1/2%; 10 Bryntall, £3 1/2%; 25 Bramley, 20s.; 20 Buller and Bassett; 50 Birch Tor and Vitifer, £2 1/2%; 25 Calstock Consols, 7s. 6d.; 20 Gunnislake (Clifters Adit), 4s.; 50 Dale, 15s.; 10 East Russell, £2 1/2%; 10 East Caradon, £2 1/2%; 30 Great Retallack, 13s. 6d.; 10 Greaton, £3; 30 Great Wheal Alfred, 12s.; 45 Molland, 2s.; 3 Mary Ann, £2 1/2%; 20 New Treleigh, £2; 20 North Halsabeagle (£1 paid), 30s.; 10 Marke Valley, £3 1/2%; 10 North Downs, £4 1/2%; 20 North Exmouth, 3s. 6d.; 30 North Nant-y-Mwyn, 3s. 6d.; 10 Penhale Moor, £2 1/2%; 50 Ribden, 7s.; 20 South Condurrow, 12s. 6d.; 5 Trelewlyn, £1 1/2%; 5 Wheal Anne, 2s.; 1 West Caradon, £2 1/2%; 10 Wheal Ludcott, £3 1/2%; 50 Worthington, 1s. 6d.; 5 West Rhosneigr, £1 2/3%.

PETER WATSON, ENGLISH AND FOREIGN STOCK,
SHARE, AND MINING OFFICES,
79, OLD BROAD STREET, LONDON, E.C.

Telegraphic messages to Buy or Sell Mine Shares punctually attended to.

M R. W. LELEAN, MINE SHAREBROKER,
11, ROYAL EXCHANGE, LONDON, E.C.

M R. LELEAN is a BUYER of Ding Dong, East Russell, Margery, Trevone, Providence, Spean Moor, St. Ives Consols, Wheal Heartie, West Condurrow, and South Condurrow, at market prices.—11, Royal Exchange, July 19, 1861.

M R. J. S. PHILLIPS, C.E. AND M.E., SHAREBROKER, &c.,
12, ST. MICHAEL'S ALLEY, CORNHILL, LONDON.

M R. T. ROSEWARNE, 81, OLD BROAD STREET,
LONDON, E.C., has BUSINESS to do in the following SHARES:—

Great Retallack. South Carnarvon Hooper.
Herdfoot. Star Park.
Lady Bertha. Wheal Arthur.
Marks Valley. Wheal Edward.
East Grenville. Wheal Heartie.
East Russell. Wheal Harriet.
East Devon Consols. Wheal Moyie.
Gawton United. Wheal Norris.
Gambler. Sortridge Consols.
Great Caradon. West Carnon.
South Wheal Frances.

N.B.—Mr. T. Rosewarne is in Devon and Cornwall, inspecting mining property. Any communication, however, addressed to his office will receive immediate attention.

Bankers: Bank of London.

M R. R. H. M. JACKMAN, MINING AND SHAREBROKER,
No. 2, ADAM'S COURT, OLD BROAD STREET, E.C.,

is a BUYER of Great Fortune, Ludcott, West Rose Down, Providence, and Margaret. Sellers will please state number and lowest price to Mr. JACKMAN, Higher Cottage, East Wells, Somerset, who is at present on a tour of inspection through Somerset, Devon, and Cornwall, and will be happy to FURNISH HIS NOTES to his clients on his return. Meantime all orders will be promptly executed on his behalf if addressed 2, Adam's-court. July 19, 1861. Bankers: London and Westminster, Lothbury.

M R. JAMES HUME, SHAREBROKER, 74, OLD BROAD STREET, LONDON, has FOR SALE:—

50 Sortridge Con., 13s. 6d. 50 Crober, 12s. 6d. 50 Lady Bertha, 15s.
50 East Grenville, 42s. 6d. 2 No. Tresekerry, £22 1/2%. 10 North Downs, £24 1/2%.
2 Stray Park, £33 1/2%. 20 East Russell, £3 1/2%. 10 East Cardon, £24 1/2%.
10 East Carn Brea, £3 1/2%. 20 Great Retallack, 13s. 6d. 5 Mark Valley, £2 1/2%.

The "Mining Share Monitor" for July sent free for six postage stamps.

Bankers: London Joint-Stock Bank.

WILLIAM SEWARD, MINING BROKER, STOCK AND
SHAREDEALER, 26, THROGMORTON STREET, LONDON, E.C.

Commission, 1 1/4 per cent. on £100 and above, and 2 1/4 per cent. on less sums. 10

M R. JOSEPH GREGORY, MINING OFFICES,
1, BANK CHAMBERS, LOTHBURY, E.C.

BUSINESS TRANSACTED IN BRITISH AND FOREIGN STOCKS AND SHARES.

Terms, 1 1/4 per cent. on £100 and above, 2 1/4 per cent. on smaller sums.

Bankers: City Bank, Threadneedle-street.

M R. THOMAS SPARGO, SHAREBROKER,
224 and 225, GRESHAM HOUSE, OLD BROAD STREET, LONDON, E.C.

Commission, 2 1/4 per cent.

M ESSRS. R. HORLEY AND CO., SWORN STOCK, SHARE,
AND MINING BROKERS, 45, CORNHILL, E.C. (late of 2, Royal Exchange-buildings), continue to TRANSACT EVERY DESCRIPTION OF MINING BUSINESS, and are in a position to obtain reliable information respecting all dividend and progressive mines.

N.B.—Messrs. HORLEY and Co. publish a Weekly Mining List, with the latest prices, every Wednesday, and will be most happy to forward the same (gratis) on application.

M R. GEORGE BATTERS, 5, COWPER'S COURT, BIRCHIN

LANE, DEALER IN BRITISH MINING SHARES AND OTHER STOCKS. Mr. BATTERS, from long experience and intimate acquaintance with all Mining Stocks, can advise as to investment of capital, at the closest market prices, and has made a selection from the mines of North Wales likely to be largely profitable in respect of dividends, and with great prospects of advance in market value. Full particulars from personal inspection can be had on application.

Mr. BATTERS for some time past has been studying the North Wales lead mining district, and periodically inspects its most important mines, and is at all times in correspondence with the most intelligent agents in the counties of Flint and Denbigh, and will be happy to advise with his correspondents as to investments in these important districts.

M R. GEORGE BUDGE, SHAREBROKER, No. 4, ROYAL

EXCHANGE BUILDINGS, LONDON, E.C. (Established 14 years), has FOR SALE at net prices the following shares:—3 East Bassett; 100 East Grenville, 4s. 6d.; 65 East Russell; 15 East Cardon, £24 1/2%; 2 South Tolpuddle, £3 1/2%; 1 West Wheal Seton, £30 7/8%; 5 Stray Park, £33 1/2%; 1 Wheal Clifford, £17 1/2%; 2 West Wheal Seton, £6 1/2%; 4 Providence, £21; 10 New Seton, £25; 3 Herdfoot, £29 1/2%; 4 Bryn Gwilog, £2 1/2%; 10 Unity Consols, 18s. 6d.; 10 North Minera, 2s.; 10 Great Wheal Fortune, £11 1/2%; 75 Great Retallack; 10 Collacombe; 5 Ding Dong; 50 Great Wheal Martha; 10 Marke Valley, £2 1/2%; 200 Waterford Insurance, 2s.; 5 North Trelawlyn, £2 1/2%; 1 Wheal Buller, £100; 5 Trelewlyn, £1 1/2%; 65 Wheal Creber, 12s.; 100 West Polmear; 10 South Bryn Gwilog, £14 1/2%; 4 Billins, 12s. 6d.; 56 Dale, 12s. 6d.; 5 Long Range, £29 1/2%; 100 North Nant-y-Mwyn, 5s. 9d.; 3 West Cardon, £4 1/2%; 2 West Sharp Tor; 20 Bryntall, £2 1/2%; 100 Great Wheal Alfred; 150 Molland, 2s.; 40 Angarrack, 4s.; 10 Old Tolpuddle, 300 Casara, 8s. 6d.; 100 Dur Mountain; 200 Bon Accord, £1 6s.; 3 West Bryn Gwilog, £24; 50 New Treleigh, 3s.; 20 Creake, £3 1/2%; 5 Buller and Bassett; 30 South Condurrow, 10s. 6d.; 90 East Rosewarne; 50 East Kongsberg, £3 1/2%; 350 Great Cardon.

FIFTEEN TO TWENTY, and even TWENTY-FIVE PER CENT. PER ANNUM upon current value of shares, in CORNISH TIN AND COPPER MINES.

Dividends payable two-monthly or quarterly.

M ESSRS. TREDDINNICK AND CO., MINING ENGINEERS,
SEND their SELECTED LIST OF SOUND PROGRESSIVE AND DIVIDEND SHARES upon the receipt of a Fee Guinea.

Review of Cornish and Devon Mining Enterprise, 6s. per copy.

Maps per post of the Buller and Bassett, Great Vor, Alfred Consols, the Providence and Margaret Districts, 2s. 6d. each.

Cornish Mines, well selected, pay better than any other description of securities, are free from risks, and entail less responsibilities than banks and other joint-stock companies. Shares bought and sold commission of 2 1/2 per cent.

Money advanced at 10 per cent. annually, for short or long periods, upon approved Mining Shares.—78, Lombard-street, London, E.C.

BRITISH AND FOREIGN STOCK, RAILWAY, AND MINING SHARES BOUGHT AND SOLD. A considerable amount of money is locked up in mining shares not prominently before the public, and consequently difficult of sale. Messrs. FULLER AND CO., 26, CHANGE ALLEY, CORNHILL, LONDON, invite the holders of such stock to communicate with them, having channels for the purchase and sale of shares of every description, independent of the mining market.

FOR SPECIAL SALE:—Messrs. FULLER AND CO. have £26500 worth of shares on hand, paying regular dividends of from 12 1/2 to 15 per cent. Also, £2750 worth of progressive shares, upon which from 200 to 300 per cent. profit may be realised in a few months, and perfectly free from risk. Full particulars may be had.

Telegraphic messages promptly attended to.

Bankers: Bank of England.

G E O R G E M O O R E,
1, CROWN COURT, THREADNEEDLE STREET.

In any business that George Moore is favoured with, in which he is the buyer, he will give CASH ON RECEIPT OF TRANSFER.

JAMES HERRON has FOR SALE the following SHARES, at the prices quoted, and FREE OF COMMISSION:—

10 Alfred Cons., £2 1/2s. 6d. 20 Great Retallack, 11s. 3d. 30 Sortridge Consols, 13s. 3d.

3 Anglo Mexican Mint., 2s. 9d. 10 Hings. Down, £2 2s. 6d. 3 So. Bryn Gwilog, £14 1/2%.

1 1/2s. 9d. 20 Herdfoot, £29. 1 South Frances, £1 1/2%.

1 Bassett, £28 1/2%. 15 Holmbois, £1 16s. 6d. 2 Silverake, £16 10s.

4 Bryn Gwilog, £32 8s. 9d. 30 Ribden, 8s. 6d. 20 Gerrick, 4s. 9d.

20 Bryant, 1s. 9d. 30 South Herdfoot. 20 Silver Bank (1s. paid) 13s. 9d.

3 Billins, £17 1/2%. 20 North Wheal Lead (4s. paid), 25s. 20 South Butler and West Penstruthal.

1 Buller, £29 1/2%. 20 Trelawny, £14 1/2s. 10 Great North Tolpuddle.

20 Camborne, 1s. 9d. 30 Trumpet Min., 10s. 9d. 10 Bryn Gwilog, £14 1/2%.

20 Bon Accord, 21s. 9d. 30 Tammar Con., £1 14s. 20 West Providence.

20 Bottles Hill, 10s. 6d. 30 Wheal Sharp Tor.

20 Buller and Bassett, 8s. 9d. 20 South Bryn Gwilog.

20 Bryntall, 1s. 9d. 4 East Tolpuddle.

20 Camborne, 1s. 9d. 20 West Sharp Tor.

20 Camborne Vean, 4s. 9d. 20 West Sharp Tor.

20 Copper Hill, £87 1/2%. 20 Wheal Unity.

20 Great Alfred, 10s. 6d. 20 Wheal Uny.

20 Great Retallack, 11s. 3d. 20 Wheal Uny.

20 Great Wheal Fortune, 1s. 9d. 20 Wheal Uny.

20 Great Wheal Martha, 1s. 9d. 20 Wheal Uny.

20 Great Wheal Sharp Tor, 1s. 9d. 20 Wheal Uny.

20 Great Wheal Uny, 1s. 9d. 20 Wheal Uny.

20 Great Wheal Victoria, 1s. 9d. 20 Wheal Uny.

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JULY 20, 1861.

Original Correspondence.

PRACTICAL PAPERS ON COLLIERY OPERATIONS—NO. VI.
ON THE MODUS OPERANDI OF GETTING COAL, WITH REMARKS
UPON THE PRINCIPAL SYSTEMS EMPLOYED.

SIR.—In describing the various systems of getting coal it would have been a much easier and more agreeable task if a plan or map could have been introduced, showing the workings of each system; however, as that can hardly be expected in the columns of a newspaper, I will endeavour to make it as comprehensible as possible without such aid. It sometimes happens that the strata between two mines is not more than a few feet in thickness. Where such is the case it becomes a question whether it is better to conduct separate workings in each mine, or to work out the under mine slightly in advance of the upper one, in the following manner:—First driving out three levels on each side of the shaft to the boundary of the workings, one for a lode for water, and the remaining two for ventilating purposes and bringing the coal along. The distance each level should be from the other somewhat depends upon circumstances, but in the majority of cases the levels will answer better with a pillar of 12 yards between each level than any other distance. The length each level is driven without being connected with the other by means of a thrall or cross-cut is, under ordinary circumstances, 30 yards. The air is forced forward by making stoppings in each cross-cut, excepting the one next to the face, which is used for an air-course. It is in these places that the workmen often suffer the most from breathing vitiated air, for it is seldom or ever considered necessary to force any air by bratticing or pipes beyond the air-thrill, unless a deal of gas is generated. Men are frequently compelled, at almost every colliery, to drive thrills up-brow, when the levels have been driven the before-named distance, and in some instances a distance of 60 yards is driven between the thrills. To those unacquainted with mining it may not be understood, but if they will fancy the level to be a tube, 5 feet by 6 feet, and of the length the thrills are asunder, and fast at one end, and at that end a transverse tube of somewhat less size, and 12 yards long, to represent the thrills that have to be driven, and not the slightest ventilation for the whole length of the tube, and you have a fair description of the systems generally employed. This description applies to all kinds of levels or headings, whether the mines are near to each other in position or not. When the levels are driven to the boundary, or rather, within a distance of 120 or 150 yards, a jig-brow should be driven up the incline of the mine to the extent of boundary or old workings on the rise, for letting the coal down the incline of the mine into the wagon or horse-road, and out of this brow levels should be driven parallel to each other at the same distance from each other, as previously given; when driven up to the boundary a work should be commenced out of the top level 8 or 10 yards wide, at right angles with the level, the roof to be supported on timber posts and what dirt or refuse the under mine yields in being worked; when this has been driven through to the old workings the timber should be drawn, and the strata between the mines allowed to fall, and the upper seam worked over the same area as the under seam has been wrought. Sometimes the upper seam of coal subsides at the same time as the strata beneath it, but that does not interfere materially with the working of it, especially if the roof overlying the upper seam stands well. When the roof is tender it sometimes becomes necessary to leave two or three pillars of coal, each 4 or 5 feet square, in each work that is driven up in the under seam, to steady the roof whilst the upper seam is worked out. The same manner of working will apply to each level, only that the upper level should be 10 yards in advance of the one below in being worked back; each level should be worked back in this order. It is next to impossible to work mines separated by only 4 or 5 ft. of strata without losing a great quantity of coal; probably one-fifth will be lost if the greatest attention is paid to keeping the levels a proper distance from each other, and to the general management of the mines, but if system or order does not prevail, I should consider 50 per cent. to be under averaging the loss of coal.

It would appear the principle of getting coal now under consideration is the best adapted for mines lying in this position, if we may judge from the following fact—that I am only acquainted with five collieries, situated in three different counties, where this peculiarity exists, and at four out of the five the before-mentioned system of getting coal has been adopted, after trying various other methods; and at the fifth the system, so far as I am aware, has not been tried. The next system we will take into consideration is a modification of the long wall system, and will suppose that we have a mine at any angle of inclination between 10° and 45° , and a shale overlying the coal suitable for building packs or pillars for support of the roof, and that the cleavage, or bord, of coal is at any angle between 20° and a right angle from the level. The levels should be driven in the same manner, and the same distance apart, as described when treating of the mines lying close together. When the levels are driven up to the boundary it will first be necessary to cut each pillar of coal through to the level above, and the top one to the old workings, by driving at right angles from the levels. When this has been done the 12 yards of coal between each level should be worked back all in one face, the same as in long wall working, with this difference, that the gob or goaf is left behind the workmen, instead of having to pass through it until the whole rank of coal is worked out, as is the case with both pillar and stall and long wall working. The uppermost level should be kept 8 or 10 yards in advance of the one below, and the same order to be maintained throughout the whole number of levels. In working the coal out until each work has had a weight, the roof is supported by timber posts. After a weight has taken place and the roof fallen, two packs should be built in each work, parallel with the level, and be continued as the coal are worked out. The packs should be kept within 4 or 5 feet of the face of the coal, the lower side of one should be at the higher side of the level, and the higher side of the other within a few feet of the level above; each pack should be 4 feet wide at the least. Stone can generally be found to build the packs out of what falls between the two packs as the posts are drawn, if not the gob above will furnish enough. Upon this principle of working a colliery very little timber is required, and it affords the workmen the greatest safety that can be afforded in the hazardous occupation of a collier, whilst I have worked out acres of coal without leaving any coal whatever unwrought; in point of economy it will bear comparison with any other system, taking it in all its bearings. A second jig brow should be driven up to the boundary on the rise, at 120 or 150 yards from the other, and levels out of it to meet the levels from the first brow, so that the workings may be continued without interruption; this should be repeated until the whole length of level is worked out—the same operations may go on on the opposite side of the shaft. I have never known a single fatal accident, or a serious personal injury, arising out of this system of working a colliery. But, as I have previously stated, it is impossible to work all mines upon this principle. Supposing we had a strong sandstone for a roof 20 yards in thickness, it would be quite impracticable to build packs in the manner previously described; or if the cleavage or bord of the coal was at right angles with the rise and dip of the mine the coal would be very difficult for the workmen to get, from always being upon the end of them, besides yielding a far less percentage of round coal. I think it will not be difficult for the general reader to see the impracticality of carrying out one general system of getting coal from the examples already adduced, and the fallacy of advocating such a theory. The system of long wall working answers admirably in some instances: in two mines in particular that I have under my management it would have been impossible to have worked the coal to advantage upon any other system than that I am acquainted with. The mines were respectively 17 and 19 ins. in thickness, and an inferior engine coal, with a very strong roof for about 3 feet in thickness—one had a holling dirt at the bottom of the seam of coal, the other was haled at the top of the seam in a soft dirt. The following method of getting them was adopted:—Two levels were first driven in the solid coal, parallel to each other, 12 yards apart, a distance of 20 yards, and a jig-brow driven at that distance up the incline of the mine 35 yards from the bottom level, at which point a wide work was commenced, working out a face of 27 yards above the wagon-road, and 5 yards below the wagon-road was worked out, and the coal thrown up brow; the coal on the lower side of the wagon-road was worked out for the purpose of holding the dirt that the wagon-road yielded beyond what was required for building a packing, or wall, to form the wagon-road and support the roof. The same was done in the bottom level, and the whole face of coal taken out to the level above, so that by making and keeping open two wagon-roads a rank of 75 yards of coal was worked out, inclusive of the width of the wagon-roads. The coal was drawn from the face into the wagon-roads by belt and chain in tubs or sledges, and put upon a wagon with a flat bottom, and conveyed to the shaft. From the upper level the coal was jigged down the incline in the usual way, by the full tubs coming down pulling the empty ones up. The face of coal was worked at that angle that answered the best for the workmen; sometimes the rise end of the

work was 20 yards in advance of the lower end, and at others nearly at right angles to the wagon-road. The roof was well packed with stone, especially for 3 yards on each side of the wagon-road, and no difficulty was experienced in keeping the roads in good order whilst the coal was worked out for a distance of from 400 to 500 yards on each side the tunnel; this, however, is the greatest length that I could recommend anyone to carry a long wall work. If the distance to the boundary is considerably more, the only difference would be that the levels should be driven in the solid coal to within 400 yards of the boundary, then open out the long work, and when the coal is worked out up to the boundary, the coal that the levels were driven through may be worked in the same manner, only working towards the shaft instead of from it. By adopting this method of working the driving of thrills, or cross-cuts, is dispensed with, and at least three levels in the example given, whilst very few tram-rails are required, and little timber. I have never seen the long wall system in any other instance to possess so great an advantage over other systems as in the case illustrated; in fact, at the same colliery, in a 4-feet mine, lying between the two referred to, it has been tried and abandoned, and a modification of the bord and pillar system of working adopted.

The method of getting coal upon what is best known by the name of the Yorkshire system is practised in other counties as well as Yorkshire, but is peculiar to the counties of Yorkshire and Derbyshire; it presents some strong features of the long wall system, the principal difference being that the banks, so called, are worked upon the rise of the mine, instead of upon the level. The width of the banks vary from 10 to 80 yards, and in some instances this may not be considered the maximum width. Sometimes considerable quantities of coal are left unworked in the pillars between the banks, but, upon the whole, the coal is got without much waste. This system will not answer where the roof is tender, or the floor creeps or lifts; in fact, it is best adapted for the districts where it is most practised; but my opinion is that the coal might be got both as economically, and much safer upon other principles. This system is open to the serious objection of always having the working face of coal at the highest point, and the gob or goaf below; and when it is considered that a sudden fall of atmospheric pressure may allow the gob or goaf to liberate itself of the pent up gas, I think most persons will agree with me in saying that this is a far more reasonable manner of accounting for the great destruction of life and property, for which the county of Yorkshire has attained such an unenviable notoriety, than attributing the frequency of explosions in that district to sudden outbursts of gas. The system of bord and pillar working is conducted to greater advantage in the North of England than in any other part of the country; it may, in fact, be called the exclusive system of that extensive coal field, and probably answers better than any other system would do; but it would be utterly impossible to work mines in many localities upon this system. The bords and headways in the northern district are often driven three times the width that it would be found practicable to drive the narrow work in many districts, from the favourable nature of the roof. Various improvements and modifications have taken place from time to time in this system of working; perhaps the greatest improvement is that of dividing the workings of an extensive colliery into sections, and making each section so far as possible independent of the rest of the workings for ventilating and other purposes, thus reducing the extent of the wastes that require ventilation by the same currents of air. The working out of the pillars is not delayed so long as upon the early principle of bord and pillar working. This system, as practised in some of the well-arranged collieries in the North, has attained a greater perfection than any other system, partially owing to the discipline that is maintained, and having a well organised and numerous staff of officers to superintend each department of underground operations. This necessarily increases the cost of getting coal, and to such an extent, that I was astonished some years ago by a statement received from one of the most rising mining engineers of the North, since deceased, showing the cost per chaldron of coal. It far exceeded that which I had been accustomed to in far less favoured districts. The advantages Nature has afforded to the Northern coal field are very often overlooked when comparisons are drawn between that and other districts. It ought to be considered that the angle of inclination is so slight that workings may be conducted with the greatest facility from the shaft in any direction; that most of the mines are from 4 to 6 ft. in thickness—certainly the thicknesses best adapted for safe and economical working; and the roof stands so well, compared with other districts, that it affords every advantage to almost any system of getting coal.

Jos. GOODWIN.

SLAG BRICKS FOR BUILDING PURPOSES.

SIR.—To mould the slag of smelting furnaces into bricks or blocks for building purposes, has long been the practice at Freiberg, and several other smelting establishments in Germany. Atmospheric agents appear to have very little influence upon mason work consisting of such bricks (in this respect), but the buildings thus constructed have a not very pleasant dark plutonic look about them, which defect, however, might be remedied by mixing the slag with some lighter substance, added, perhaps, during moulding.

COLLIERY VENTILATION.

SIR.—Mr. Ross admits that economy of fuel is in favour of the machine, also that the effect produced will be the same in each case, even when applied to a pit of 85 fms. (as Seghill is), and I propose to show that it is also the most economical in every respect.

Mr. Struve, the inventor, says (page 281, Committee 1849) "that a machine, including steam-engine capable of exhausting 196,000 cubic feet of air per minute, would cost 700£." But suppose we say for a machine capable of exhausting 50,000 cubic feet a minute 700£, instead of the 3000£ put down by Mr. Ross. It may be put up where there is pumping machinery, and where enginemen are necessarily employed night and day. Suppose, therefore (and it is ample), we say 50£. a year as a fair proportion of attendance attachable to the machine, instead of the 109£. 4s. noted by him, the other figures as before, we have the following:

	Mr. Ross's estimate. Amended estimate.
Allowing interest, &c. [copy from July 6]	£240 0 0 £56 0 0
Attendance	109 4 0 50 0 0
Oil and tallow	18 17 0 18 17 0
Coals	78 0 0 78 0 0
Wear and tear	20 0 0 20 0 0
Total per annum	£266 1 0 £222 17 0

	Interest, &c.	Attendance	Shant repairs	Coals
	£ 19 4 0 78 0 0 12 0 0 156 0 0 Total per annum	£ 19 4 0 78 0 0 12 0 0 156 0 0 £265 4 0 £265 4 0		

That is to say, the saving is 42. 7s. in favour of the machine.

Mr. Struve will be able to put us right as to the cost of the machine, which is the principal element in the saving. The objection to its employment from liability to derangement appears to be untenable, if we may judge by the Risca machine. It appears to have gone contumuously since its erection, or, at all events, stoppage for repairs does not appear to have caused any accident from fire-damp accumulating in the workings. As to its adaptability to emergencies, if made large enough in the first instance, the quantity of air in circulation in any mine seldom varies so much that the machine will not adjust itself to it as readily as the furnace. Take Hetton for example—in 1849 it had 196,000; in 1853, 225,000; in 1860, 200,000; so that, notwithstanding the increased extent of waste, in 12 years (1849 to 1860) the quantity is about stationary; and had there been machine ventilation there, the machines erected in 1849 would still have been sufficient.

The Risca upcast is 16 ft. by 10 ft., and is 35 fms. deep. On Jan. 3 last (see evidence, page 80), when 36,000 cubic feet of air was passing per minute, the pressure on the water-gauge was 1 5-10ths in. Will Mr. Ross tell us what quantity of coals would be consumed in a furnace placed at the bottom of that pit to pass this quantity of air.

Regarding staples between the Black Vein and the Big Vein, it occurred to me Mr. Ross had not examined my proposal, and I still think so. My proposal is to drive return drifts in the Big Vein (the upper one), and connect these drifts with the Black Vein by means of staples—one every acre, and by this means the intervening strata will be drained of gas, and the permanent air-courses will be more easily maintained. It appears to me that a staple every acre will cost 1d. a ton on the coals produced in the Black Vein. In a goaf of 8 acres there will be eight staples—not one, as Mr. Ross supposes; but should it happen that the manager had reason to suspect that a goaf existed which could only be cleared by an additional staple, he has only to put it down. The working faces would be ventilated in the ordinary way; the staples nearest the faces would be

the returns. The drifts in the Big Vein, and the staples, may be ahead of the Black Vein workings, and there would be an advantage in this. The number of old staples allowed to stand open, and the quantity of air allowed to escape at each, would be regulated by the requirements of the mine; but the quantity of air in circulation should be sufficient to keep every part of the workings and waste ventilated.—RALPH MOORE,
Glasgow, July 11.

Mining Engineer.

HENDERSON'S PATENTS FOR EXTRACTING METALS, &c., FROM ORES.

SIR.—There has appeared from time to time in your valuable Journal various articles, by Mr. Henderson, on the extraction of copper from poor copper ores, and many of the remarks thrown out by this gentleman are exceedingly valuable. Being much interested in the subject of working poor copper ores, I have searched for all possible information on the subject, and a friend having put into my hands four patents of Mr. Henderson's, assuring me I should find everything required in them, with your permission I will make a few remarks thereon.

The first patent is dated 1853, and is entitled "Improvements in Manufacturing Sulphuric Acid and Copper from Copper Ores," &c. The acid part of the patent I am not acquainted with, and will, therefore, not touch upon. After the ores have been freed entirely from sulphur "they are mixed with ores containing no sulphur and large excess of silica, in such proportion that the free protoxide of iron, and of other bases, may form with the silica proto-silicates. For every four parts of copper in the mixture, one of coal or coke, or other carbonaceous matter, must be used. The mixture is then smelted in the usual manner," and in this way metallic copper is obtained fit for refining. Now, surely Mr. Henderson, when he wrote and claimed the above, could not have been so ignorant as not to know that Mr. Napier had patented the same thing some years before him;—so we have nothing here new in the mode of extracting the copper.

We shall now pass on to 1857, when Mr. Henderson obtains another patent, in which he professes to have discovered something *very new* and grand when he finds that copper may be extracted from its ores by means of hydrochloric acid; but alas! this method of extracting copper from poor copper ores was described in your Journal long before, and is not new; the rest of the patent is practically so absurd as to require no comment.

In April, 1859, Mr. Henderson obtained another patent, for "Treating Ores to obtain certain Products therefrom." The different classes into which the ores to be treated by this patent are divided is quite a study. Those ores from which the copper only is required are treated by the patent process of 1857, which we need not again describe. Ores containing gold, such as gold quartz, are very ingeniously worked by a process described in the *Mining Journal* before the date of this patent; and, if I mistake not, it is a process of Plattner's—I refer to the extraction of gold by chlorite. To obtain silver from its ores Mr. Henderson uses the beautiful process of Zier vogel, invented, I think, in 1840, and also described in the *Mining Journal*. He also prefers, at times, to use Augustin's method of forming and dissolving chloride of silver in a hot concentrated solution of common salt (chloride of sodium). Messrs. Vivian, of Swansea, used this process for extracting silver from copper ores long before Mr. Henderson's patent. It is also stated that after forming chloride of silver it may be dissolved out by hyposulphite of soda. Now, this was suggested by Dr. Percy in 1848, and soon after brought into practical use by Von Patera. Again, to extract gold from copper and iron pyrites, the ores to be treated are mixed in such a way as to yield, when fused, a regulus of from 30 to 40 per cent. of copper; and now, in the language of the specification, page 8, "To the melted regulus I add a mixture of two parts anhydrous sulphate of soda (salt-cake), and one part of coal or other carbonaceous matter." When the requisite quantity of this mixture has been added the doors of the furnace are closed, and the whole allowed to remain in fusion for some time, when it is tapped out. "When the pigs of metal have set, but whilst still hot, they are thrown into a tank or pan containing water, which will speedily boil; the pigs of metal will disintegrate like quick lime." This, Mr. Editor, is certainly a most beautiful idea, but had Mr. Napier not already patented this process of making powder years before Henderson's patent, it is more than likely the latter would never have known anything about it.

And now, Sir, for patent No. 4, dated Dec. 20, 1859. This has nearly the same title as the last. Here Bergmeister's process for extracting copper from poor copper ores by means of sulphuric acid is used, *but not claimed*. Nevertheless, this is the foundation, and the only practical part of the whole process; the other part, treating of the volatilisation of the chlorides of the metals at different temperatures, is very beautiful in print and theory, but how far practicable remains to be seen. I have heard that some company abroad is about to take up one of the numerous processes of Mr. Henderson, and that the one sought for is the extraction of copper by sulphuric acid. I should like to have Mr. Henderson's particulars of its value.

Mr. Henderson is the best compiler I ever heard of: his specifications are got up in the most ingenious manner, and the different processes he adopts fit into each other admirably. The pathwork is complete. And now, Mr. Editor, I conclude by asking if Mr. Henderson would not have done much better had he expended less money in re-patenting the inventions of others, and made but one short specification, as follows:—The ores are first washed, dressed, and sorted, then treated for the metals they contain in the usual known methods.—July 16.

A COPPER REFINER.

TERMINAL CHARGES.

SIR.—As certain coalowners have been making a great noise about the clause fixing a maximum for terminal charges, I think you would confer equal benefit upon the mineral and the railway interests generally by publishing the subjoined extract from the letter of "A Great Western Shareholder," which originally appeared in the *Mining Journal* of Feb. 12, 1859, at which time the charges for carrying mineral by railway was exciting much attention. The writer of that letter stated that the directors of the Great Western Company, in reply to the advertisement and circulars (issued by their opponents), tending to mislead, stated that they thought the best answer to such misrepresentation, industriously propagated to serve a particular object at that moment, would be to publish an authorised scale of rates, as well as the particulars, which was in operation, equally and impartially, with every freighter who might be willing to transit coals over the railway. According to this statement, the scale of rates over the Great Western lines by contracts, if conveyed over 100 miles in full train loads, under agreement for a term of years, was

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JULY 20, 1861.

local magistrates were part-owners of the mines; but if the House read the bill a second time, he would, in committee, propose to strike out the words which would provide that form of procedure, and move the insertion of others which would make the application one to a judge in chambers. It would not, however, be necessary for the complainant to wait till the injury had been accomplished; for the bill would enable any person who had reason to suspect that operations were being carried on which would result in the abstraction or dilapidation of his property, to make an application for the necessary inspection of the mine. Cases had occurred in which enormous quantities of coal had been feloniously abstracted from mines before the owners were able to prove that means of communication had been furiously opened; and in other instances, owners had let their mines to men of straw, giving them a royalty that amounted to little more than ordinary wages, when populous districts were approached and actions for dilapidations were apprehended. The withdrawal of the bill is to be regretted, though it is probable that some of its provisions were unnecessarily strong.

WHEAL EDWARD MINING COMPANY.

A general meeting of shareholders was held at the company's offices, Auntrifriars, on Thursday, Dr. J. E. MATHEW in the chair.

Mr. E. KING (the secretary) read the notice convening the meeting, and the minutes of the last were read and confirmed. The accounts showed—

Call	£ 496 16 11
Copper ore sold	2034 16 11 = £2531 13 10
Balance last audit	£ 289 9 3
Mine cost, merchants' bills, &c., Feb.	509 17 5
Ditto, March	503 11 6
Ditto, April	575 6 8
Ditto, May	481 18 = 2459 12 11
Leaving credit balance	£ 71 10 11

The report of the agent was read, as follows:—

July 17.—South Lode: The 92 west is extended about 7 fms., and the lode has yielded good stones of ore; but the end is 3 ft. wide, and at present disordered; it is suspended for the present, but will be resumed again as soon as it is practicable. The 81 west is extended about 30 fms., and we have just passed through the cross-course next to the caunter lode, and hope to reach the latter in about three or four months; the lode in the end is 4½ ft. wide, producing good stones of ore, and has a promising appearance—indeed, better than I expected to have seen the side of the caunter lode; and although there is nothing certain, still there is a hope that the old shoot of ore may improve again, and I have strong reasons for entertaining such an opinion. In the 71 west we have passed through ore ground for about 15 fms. in extent, the lode yielding 2,4, and 6 tons per fm.; in the end the lode is very large, worth at present about 5 tons per fm., with every prospect of a continuance of ore ground. In the 61 west we have passed through ore ground for about 28 fms. in extent, lode yielding 1, 3, 5, and in places 8 and 10 tons per fm.; in the end the lode at present is worth 1½ ton per fm., and assumes a promising appearance. No. 1 rise, in back of this level, is communicated to the 50, which is now being driven west of rise in a good lode of ore, worth 4 tons per fm.; the opening up of this level (50) at the present point has brought a long piece of dead work to a close, being over 30 fms. driving, averaging over 7 ft. per fm.; it is, however, a good thing accomplished, as good ventilation is obtained, and the end will now go on in ore ground; and having accomplished this object we will see that we are now in a favourable position to commence to section up the ore ground for economical working between the 61 and 71 fm. levels, also put up rises or stope the back of the 61 to good advantage when necessary. In the 61 east, on the north part of the main lode, the lode is 3 ft. wide, producing good stones of ore; we fully anticipate seeing an improvement in this level when we reach the junction, which is probably 8 fms. ahead. In the 40 east the lode at present is not of much value, although it is of good size, and composed of a very congenial matrix; at present we have two stope working in this level, one in the back the other in the bottom, and the lode is worth about 4 tons of ore per fm. at each point. The tribute at present is rather limited, and the returns from this department for the two months will be small compared with the two months previous. All that is wanting to bring about greater returns from this particular department is a reaction in the standard, for I do not consider it policy to pay 13s. or 14s. in tribute for working ground that will pay both men and adventures at 9s. or 10s. in a fair standard.—North Lode: In the 62 cross-cut north, on the course of the boundary cross-course, we have so far been successful in opening; two men have driven 20 fms. 3 ft. 6 in. in three months, and the ground is very easy to open for working in the end at present: I calculate we have about 20 fms. more to drive to reach the point where the north caunter ought to be found, and the probabilities are that we shall cut two other lodes in about 70 fms. driving; it is a beautiful channel of ground, and highly mineralised. In the 62 west the lode is small, but goes on regular, and occasionally we find rich stones of ore; the country about it is congenial for mineral, and on intersection of the caunter or cross-course seen on the south lode (which cannot now be far off) we hope to see a good change for the better. If anything of value is met with at either of those points it will be all profit over the present cost, as the cost at present is about covered by the returns from the south lode.—Future Operations: I do not see that we can do better in the next four months than push on the western ends, to continue the north cross-cut, and section up the ore ground discovered, and we hope to raise ore enough to pay all cost of doing so. Our next sampling will be about 200 tons of fair quality, and I estimate the cost for the next four months at about 440/- a month, exclusive of dues.—M. H. EAST.

The CHAIRMAN, having moved the adoption of the reports and accounts, stated that it was a source of congratulation with the committee to find that the operations of the past four months had been so satisfactory; and it was but just to state that had it not been for an arrear of 60/- or 70/-, which was an extra charge in the present cost-sheet, and the serious drop in the standard, which latter had made a difference upon the four months' sale of ore of about 300/-, there would at the present meeting have been a balance in favour of the company of 450/- It would be seen from the agent's report that the future cost would be about 440/- or 450/- per month, and that the returns of ore from driving the ends and sectioning out the ore ground discovered in the west would quite meet that outlay. The committee did not recommend any additional amount of ore being raised at present, in consequence of the depressed state of the copper standard.

Mr. HOWLANDS, as the largest shareholder, fully concurred in the views expressed by the Chairman, for he most certainly had no wish to make profits by selling the ore at the present low price of copper ores.

The SECRETARY explained by the section that the 61 end had passed through a run of ore from the caunter 30 fms. in length, and which had produced from 1 to 10 tons per fathom, the present end being worth nearly 2 tons per fm. The 71 fm. level had passed through 15 fms., worth 2, 4, and 6 tons per fm., the present end yielding 5 tons per fm., and was about passing to the same run of ground as the above, where it had produced 10 tons per fm. The 50, which was being driven in the same bunch of ore, the lode worth 4 tons of ore per fm., and a rise had been put up from that level, the appearance of which justified the belief that the ore would make up to the gossan. He then called particular attention to the 81, which had passed through the cross-course, and the lode west of the cross-course had assumed such an appearance as to lead any agent to believe that a course of ore would be met with between that cross-course and the caunter. If such should be the case, it would be a feature of the utmost importance, as the shaft was down to the 92, and the end driven about 5 fms., so that in about 25 fms. driving the 92 would come up to the same run of ground, with regard to the eastern part of the mine, there were two stope working—one in the back of the 40 and another in the bottom, each of which was producing 4 tons of ore to the fathom. The 40 end having passed through this first bunch of ore, in about 5 fms. driving it would intersect another cross-course, between which and the boundary cross-course a large deposit of ore would be looked for. He considered the mine at no former period ever presented such features of success as at the present time. He could safely say that no calls would be required, at all events, during the present year; and should the present prospects continue, and the standard improve, considerable profits might with reason be anticipated. He felt that he was justified in congratulating the proprietors equally upon the position as upon the prospects which their property presented.

Mr. ROSEWARNE thought there were two very important points for the consideration of the shareholders. It would be seen by the agent's report that two men had actually driven the cross-cut north from the north lode 20 fms. in three months, and in another three months, if they had the same success in driving, the caunter would be intersected. It was important to know that upon the intersection of the same caunter with the north lode a large deposit of ore was met with. In addition to that they were driving the 52 west, on the north lode, where, upon meeting the caunter, they had every reason to believe the same satisfactory results would also be realised as had been the case upon the south lode, in which case Wheal Edward would rank among the best mines of the Calstock district.

The SECRETARY, in answer to a question, stated that there had been but ten shares forfeited, which now were the property of the company. Every known liability was closely charged up. Of course, all mines were suffering from the depressed price of metals; but, as an instance of how they had been peculiarly affected by the drop in the standard, he might mention that between the time their sale of ore was sampled and the time it was sold there was a drop of about 200/-.

Mr. HOWLANDS reminded the meeting that, in spite of those adverse changes, the estimate made at the last meeting as to the returns had been realised.

Mr. ROSEWARNE inquired the reason why the item referred to by the Chairman had not been included in the last balance-sheet.

The SECRETARY replied that it had arisen from the fact that a certain amount should be charged against some pitwork, which it had been proposed should be sold, but, considering the requirements of the mine, it was subsequently decided that it should be retained.

A SHAREHOLDER enquired which was the most productive part of the mine at the present time?—The SECRETARY replied that the greater proportion of their returns during the past four months had come from the eastern part of the mine.

Mr. ROSEWARNE fully believed that in the development of the north lode there were very good chances of meeting with other lodes—in fact, he was of opinion that the excellent chances they had in the cross-cut at that point were alone worth all the money the mine was selling at in the market.

Mr. MC CALLAN could not let that opportunity pass of congratulating the shareholders upon the satisfactory arrangement which had been made between their company and the Wheal Arthur, for which he was sure they all felt deeply indebted to their zealous and indefatigable secretary, Mr. E. King. He (Mr. Mc Callan) felt persuaded that each company would soon experience the very great advantages arising from that arrangement, and, therefore, he congratulated his co-proprietors on the achievement of that which ought to have been accomplished years ago.

Mr. ROSEWARNE never recollects the mine in such a favourable position—indeed, if they choose, dividends could be paid directly.

The report was then received and adopted, and the accounts passed and allowed, when a formal resolution was passed that a special general meeting should be convened for the purpose of declaring forfeited all shares upon which calls shall remain in arrear.

Upon the proposition of Mr. ROSEWARNE, seconded by Mr. COSTELLO, the committee were unanimously re-elected.

Mr. ROSEWARNE, referring to the arrangement which had been made between the Wheal Edward and Wheal Arthur Companies with respect to the adit, thought they would be neglecting their duty as shareholders if they separated without according to their secretary the praise and thanks to which he was entitled for having brought about that desirable arrangement. For he (Mr. Rosewarne) felt persuaded that had it not been for their secretary an arrangement so amicable and satisfactory would never have been agreed upon. To Wheal Edward alone it would prove, he was satisfied, worth at least 1000/-, and it was of equal importance to Wheal Arthur. He had much pleasure in proposing that the best thanks of the meeting be given to Mr. King for the active part he had taken in effecting an arrangement so desirable.

Mr. MC CALLAN had much pleasure in seconding the proposition, which was put and carried unanimously.

The SECRETARY, having acknowledged the vote, stated that he quite agreed with Mr. Rosewarne as to the intrinsic importance of that arrangement, and he hoped, as he believed, that each company would soon largely participate in the consequent advantages. He believed that that arrangement had been made years ago, Wheal Edward would never have gone from a dividend-paying to a call-making mine; but, considering their present prospects, he trusted that henceforth their career would be marked with that success which the proprietors merited.

A vote of thanks to the Chairman was passed, when the proceedings terminated.

GOLD MINING IN VICTORIA.

SIR.—The first decade in gold mining in this part of Australia having just closed, it must naturally be a subject of curiosity amongst those interested in mining matters as to what improvements have taken place during that period, and also whether the extraordinary produce of the precious metal is likely to continue falling off, as it decidedly has during the last three years, or whether, on the contrary, it is still possible to increase at a greater ratio than hitherto. To these important considerations I intend to address myself, feeling convinced that in England very little is known pertaining to the Australian mines, and that a great many misrepresentations, somehow or the other, find their way into the columns of the English press.

Having been constantly engaged or interested in mining pursuits since the year 1852, it is a very easy matter to trace step by step the great advancement that has taken place in the colony, and mark the changes art and science have made in the mode of getting gold. On my first arrival there was scarcely any rule to go by; shafts were sunk here, there, and everywhere, and the whole pursuit of digging was a complete lottery, as judgment had little or nothing to do with it. The tub, cradle, and tin dish were in constant request; and it is since proved that more gold was lost behind, or heedlessly thrown away, than was extracted. This applies more particularly to the gold fields of Mount Alexander, Bendigo, and Ballarat, which, although the first opened, have never surpassed for richness or permanency, each of them still furnishing remunerative employment for thousands of miners, with every probability of doing so for many years to come. The first influx of people that visited and worked these mines naturally were ignorant of even the commonest appliances, and, as I before said, left the wealth behind them; but so badly was the ground treated that in many cases lives were sacrificed through carelessness, or the want of proper knowledge how to secure themselves. The pick-and-shovel men, though still existing, are a different class now to what they were. In olden days they would bottom their shafts, i.e., sink it to the strata whereto the gold lay—and then put in a tunnel or two, and go away to some other place. Now the small area of ground allotted (8 x 8) is enlarged to 60 x 60, and it is entirely guited out, and a mass of timber supports the ground from which the golden vein and refuse have been hollowed out,—nothing is left; and a gold field at the present time, after a rush of three or four months, is almost deserted, and in many instances so little is left behind that a bare subsistence is scarcely to be obtained by those who remain, except they are fortunate enough to discover new and unworked ground. Here, all miss allow, is a great improvement at once. Nothing is lost; or if there is, the time has not yet arrived for what little may remain to be recovered so as to pay. The tub and cradle is now a worn-out institution; the long Tom and the quicksilver cradle have superseded them long since. By the first-named process two men could not wash more than two loads per diem; but by the latter, with the assistance of one man and a horse, twenty or thirty loads can be got through in a far more effective manner. This is an improvement also; but in many districts it is found more advantageous to put the stamping-mill into operation and crush every particle, as it is found that the fine gold does not collect as well with the cradle, and, moreover, a good portion of the cemented rock contains gold that would otherwise be lost; and this latter mode is used wherever mills are contiguous, as the tailings from the Tom and cradle invariably pay well after being put through three or four times in succession, and hundreds of men and boys earn 4/-, and 5/- per week each by simply washing over the tailings, from which all the gold has been supposed to have been extracted; and if these are again taken to the mill they invariably pay well for crushing, and in many instances have left a large profit to those who have secured them. These remarks apply more to the "individual miner,"—a class of men who still retain all the old habits of the colony, delighting in supposing themselves free and independent, and scorning the idea of ever working anywhere for wages, knowing they were the pioneers of the gold fields, and acknowledged as the still principal supporters of the colony. These men maintain they have an individual right to be the first free owners of every newly-discovered gold field, and would rise as one man against the capitalist if he dared to monopolise anything in the shape of new ground, and will not allow him to show his face until they have abandoned it as worked out and no longer capable of giving them employment. They rove from place to place, like the waves of the ocean—here to-day, gone to-morrow. As soon as one spot is worked out another is providentially discovered; and in a few days a place that has hitherto been a wilderness will be peopled by thousands, and hotels, theatres, casinos, and all sorts of amusement spring up as if by magic; but, strange to say, each new field that is opened shows a steady falling-off from the old, and the miner is not so fortunate as he used to be. The great "piles of gold" are getting scarcer and scarcer; and from each new rush the men that are "homeward bound" get small by degrees and beautifully leas, and it is to this circumstance the falling-off in gold has chiefly to be attributed; and I am quite positive that if the colony were only dependent upon this large, moving, roving mass it would very soon retrograde, and become very poor to what it is. In vain are all their improvements in mining if the gold is not there; as were that improvement to be still successfully carried out, nothing can counteract the fact that the individual miner is year by year getting worn out, and the cause the poverty of the new discoveries compared with those of old. Bendigo was astonishingly rich, and even in latter times Ararat and Pleasant Creek yielded tons of gold; yet since then very little has been found out, and if the science of mining had not been so much looked into the shipments would have been much less than they have been.

The advent of machinery has done wonders. On Ballarat the individual miner is almost unknown; every undertaking is a company requiring large capital and the assistance of steam-power, and Ballarat is the second city in the colony. There the old system is completely discarded,—it is laughed at, is almost unknown. Deep shafts are not, in close proximity to each other, as in some gold fields, but at a great distance, a regular mine is opened, and an immense saving effected; indeed, the old style on this field would not pay at all, and were not capital brought strongly to bear upon labour and assist it, Ballarat, as a mining district, would have been extinct long ago; and yet in Victoria there are plenty of places like Ballarat, that only require the same chances to be offered them to be as great and prosperous as it decidedly is, and the time is not far distant when this aid will be afforded where it is now withheld, simply because everything has not yet found its true level, and capital is not sufficiently plentiful throughout the colony. It is the want of capital the mining population are now suffering under. A lead of gold will be followed, found to be rich, it is traced to the water, and machinery wanted to work it; the word "water" is enough, the place is no good, and is in many instances at once deserted, and there the ground lies, unworked and uncared for. The same, though in a lesser degree, may be said of our quartz reefs: let them be traced below the water level, and a complete stagnation almost invariably ensues, until some enterprising capitalist steps forward, buys up cheap, and monopolises a fortune; but even then are they very scarce, as chances are so many and occur every day.

It is not many years since that quartz mining first attracted any attention at all. It is true everybody could find gold in quartz on many hills about, but it would scarcely pay to break the stone with hammers for the gold; since then, however, the greatest improvements have taken place, and this branch of mining will be the mainstay and great dependence of the colony. Five years since 71, and 81, was readily paid for crushing, which was done very imperfectly, now it is actually done much more perfectly for 10s. and 12s., consequently miles of reef heretofore lying idle and unworked are now gradually being taken up and worked to advantage. At Pleasant Creek alone five years since only two parties were at work upon the reefs, now they find subsidence for 2000; and although the great returns are getting scarce, yet it is found that small yields pay better now than large ones did then; this is owing to the knowledge attained by experience, and the cheapness of machinery, combined with the reduction in everything, wages included. Where 20 tons were raised from a claim three years since, 150 tons will be raised now in the same time. Science—rude, it is true—is brought to bear upon the matter instead of main strength and stupidity; and gradually that science is getting more perfect, so that by the aid of capital we can see the advantages we possess, and fortunes giving a silver lining to the cloud that once looked so dark. But even here, the same as all over the colony, quartz mining is only yet in its infancy; and it is too palpable the vast riches of this colony are yet undeveloped, and the same alone taken off the mass it contains. Steam is only beginning to be introduced in place of horsepower in regard to claim workings, and a reckless expenditure is carried on everywhere; but with more knowledge greater results will be attained, and larger profits accrue to those engaged in it. As an instance of how much labour is employed in this class of mining, I will briefly intimate that in the place just spoken of 35 claims, averaging 80 ft. each, support directly and indirectly in this place alone above 2000 people; men get 3/- to 4/- weekly, boys 2/-; and were the place to progress in the same ratio as it has done, in two years that number would be doubled. It is thought by some that our reefs are not so permanent as we suppose; I can only say we know of ten years' work in some claims, and that not taking us more than 250 ft. below the surface, and the deeper the lodes are taken the richer they are; this is the general rule, though there are many exceptions. Quartz mining well; with capital, an average claim will return 1000 per cent. in many instances. But, I am sorry to say, a great deal of chicanery has been made use of by designing persons not so long since in regard to quartz, that it is not thought so favourably of as it was. A host of mining companies sprung up, everybody invested in them, and, as usual, four-fifths of them were complete swindles. It is not every reef that holds gold, but companies were absolutely started and carried out without the slightest shadow of a prospect. This ill-advised and unpunished proceeding has done the colony a deal of harm, and it is only now beginning to recover from the baneful efforts of a few unprincipled men, who ruined thousands without much benefiting themselves. But were a few companies started with sufficient capital to invest, by assisting those who require assistance and who have the ground, but cannot work it for want of capital, then would speculation be a certainty; but I always look with suspicion upon those who tell us a quartz reef is a sure fortune to any one possessing it.

The colony has lately had a great discovery made in it by a new process of extracting gold from tailings. It is now found out that by placing the already operated upon quartz in a retort and vapourising it with quicksilver all the gold will be got out of it; and from the refuse of quartz that has only realised 4 dwt., to the ton, 4 ozs., has actually been obtained. Trials have been made everywhere, and generally successfully; and I am enabled to speak from experience in the matter, and to assert that, although not so great a believer in it as many, yet I am confident that ten times as much more gold can be got by this process from stone than from the original one. This great and important discovery will, of course, cause a complete revolution in the colony. The millions of tons of tailings that have been thrown away will now be collected, and millions of ounces obtained from them; and there is no knowing how vast an opening to wealth is now revealed to us. Quartz property is daily rising in value. The miner will not send his stone to be crushed without he gets a promissory note for his tailings; and from one end of the colony to the other it is hailed with astonishment and joy. The happy state of quartz mining, coupled with this discovery, begins, as it were, a new era in the colony, and the people of England may safely reckon upon a large increase in our shipments after a few months have past, or time sufficient elapsed to enable it to be brought to perfection; but even if it is not, from quartz, and quartz alone, a large increase may be depended upon, as every gold field in the colony is now opening up fresh sources of not only wealth but of permanency. And during the last year on one place alone, called Ingleside, more than 100 reefs have been discovered; some of them richer than any yet known, and a goodly number proved to be productive and payable; and now that attention is fully attracted to reeling the real and sterling riches will flow from where they have been too long withheld.

One very great drawback to prosperity emanates from the Government. We only obtain 32, 13s. 6d. per ounce for standard gold,—2s. 6d. per ounce is charged for duty, and the banks make a profit, deducting freight, of 2s., so there is a real tax upon our industry at large, preventing, as it does, a great many undertakings from being successful, as in many cases the 4s. 6d. per ounce will leave a profit, whereas by paying it there is a loss. It also acts very unfairly; as if a party of men get 100 ozs. of gold that only cost 52 in getting, they are taxed the same as another that obtain the same amount of gold got out, perhaps, at a loss. Meetings are held on all the "diggings" about the goldfield, and the pressure from without is getting so strong that the Legislative Assembly will ere long be forced to repeal a tax so obnoxious, and the sooner they do so the better will it be for all classes. In regard to the establishment of a Mint, it is passed here by both Houses of Parliament, but the Queen has declined to give her sanction to it, consequently a year must elapse before we are relieved of this burthen.

The digger has greatly changed of late years in many respects. He is gradually giving up all his bad habits; drunkenness is not so prevalent as it used to be, and the churches and chapels are well filled by a quiet and respectable population. Yet within there is the same reck

as it has been ascertained that a considerable saving will be effected in carriage by conveying the ore to the port instead of taking the fuel to the works at the Burra. It is also intended to increase the dimensions of the works, so as to smelt the ores from Wairoa and any of the other mines which have lately commenced operations in various parts of the province. The smelting-house will then be made double the width, and two other double houses of equal dimensions erected as required. The erections will have little outward show, being simply a galvanized iron roof, upon wood pillars 12 in. square, with iron principals, the side partially enclosed with galvanized iron. A tramway will be laid for the purpose of conveying the coal from the wharf to the building, and another carried above the furnaces to deliver the ore. The sleepers for the posts have been laid on the natural level; but about 10,000 tons of silt will be taken from the bed of the river, which, in addition to increasing the wharf accommodation by about 100 ft., will raise the level of the works 6 ft., and thus materially strengthen the foundations. It is expected that the present building will be completed and the furnaces lighted by Sept. 1. It was intended to celebrate the laying of the first timber by some demonstration on an extensive scale, but, owing to various circumstances, it has been deferred until the furnaces are lighted for the first time.

AUSTRALIAN MINES.

PORT PHILLIP AND COLONIAL GOLD.—Mr. Bland, May 25: The quantity of quartz crushed in the month of April was 2530 tons, yielding 2120 ozs. 14 dwt. 21 grs. of gold, or an average of 16 dwt. 18 1/4 grs. per ton. The receipts on Clunes account were 37300. 9s. 11d.; expenditure, 14252. 2s. 2d.: showing a profit on the month of 2357. 7s. 9d. The machinery was all in good working order. A remittance of 2000. has been received by this mail.

GREAT NORTHERN COPPER.—May 25: It is with much satisfaction we refer you to Capt. Pascoe's reports of the continued favourable character of the Nucceena Mine, from which such large returns of ore will be so speedily realised; the deal work being now in such a state of completion as to admit of its being done with little delay. You will also be gratified to find Capt. Pascoe has now ample hands, and intends at once to vigorously prosecute operations at the other mines of the company. We have shipped in the Colchester, for Melbourne, 65 tons of copper ore, which is to be transported to London, and you will please to cover this in your open policy of insurance. In addition to the present shipment, you will observe Capt. Pascoe advises having sent from the mine 40 tons of high produce ore, and has 70 tons ready for the drays on the road up, besides 200 tons at surface ready to clean up. This, we think, will be highly gratifying to the shareholders, as it must be borne in mind that it has been produced while the greater part of the late operations have been on dead work; the late rains will facilitate cartage, and we may look to having large parcels of ore at Port Augusta ready for shipment. Capt. J. B. Pascoe (May 17) reports.—"Since my last we have sunk the shaft D 11 fathoms below the deep adit level; we shall sink it 3 feet deeper, and then drive to communicate with the winze C in the 10, below the deep adit. As soon as we communicate with the winze C, we shall drive the 10 both east and west of the shaft, and take away the backs for ore. We have the lode standing by the side of the shaft to the surface; it is large, and shows good copper ore in all places where we have cut into it; this looks well, and I hope in another month to be raising a large quantity of good ore from this part of the mine. The lode on section 2 is 15 feet wide, composed of gossan and copper of good quality. The lode in section 5 continues good. We have sent to the port 40 tons of good ore (35 per cent.), and have 70 tons of same quality cleaned up and ready to send away; also, about 200 tons at the surface to dress up, which we shall push on, as there are many drays on the way up. We have plenty of rain and abundance of grass, so that we shall have plenty of cartage done. We have 95 men employed in all, and have 22 good miners from the Burra Burra near at hand, on the way up. I shall start a party of miners to the eastern mines immediately, so that the Nucceena, Oratanga, Wheal Stauri, Chambers' Consols, and the Morroo Mines, will all be working in ten days from this date."

NORTH RHINE COPPER.—Capt. Barker, May 25: The eastern cross-cut is now 44 fms. 11 ft. east of Cope's, and is being pushed on by eight men. The ground has been favourable the last fortnight, but is tight at present. More progress would have been made but the engine could scarcely keep the water; in fact, it was 4 ft. deep on the platt three days last week. The south end remains as last reported; a good lode in the end, worth 30t. per fm. The main lode has been discovered on section 562 in two places, showing a fine strong lode right through the property. Barker's whim-shaft has been sunk 8 ft. deep, capable of raising all the ore for 80 fms. north and south of it. With regard to the mineral claims on York's Peninsula, I have to inform you that the survey of the same has been made; they contain together 150 acres. I would mention that our section 494 joins 392, in which latter section a lode of great value has been discovered.

KAPUNDA.—May 25: The men driving the 60, east of Bagot's engine-shaft, to cut that part of the main lode, had met with soft ground and water, which made the driving slow and troublesome, but they had cut several branches full of rich black ore, and the ground generally was considered indicative of a rich lode. The other workers are employed in opening up fresh tribute ground at Lanyon's shaft. The March ores were 282 tons of 17 1/2 per cent. average produce, equal to 48 1/2 tons of pure copper; and the yield for April was estimated at 330 tons wet weight, and as of higher average produce than the ore lately raised. The suspension of two of the furnaces owing to the building of a new chimney stack, and the want of poor sulphur ores (which were then being raised) to clear off the slags, had caused a temporary accumulation of ore, and consequent decrease in the make of copper, but this would soon be corrected. The shipments advised are 20 1/2 tons of copper, per Sussex, Melbourne to London, and 26 tons per steamer *Alindra*, to Melbourne, for transhipment to London.

SCOTTISH AUSTRALIAN.—May 21: Good Hope Mine: Dickson's shaft was down 24 fms., leaving 6 fms. further to be sunk before the lode could be cut by driving in the 30. The progress made in sinking the shaft continues to be slow, in consequence of a considerable quantity of water being met with in going down, but it is stated not to be half as much as present appliances are quite able to cope with. The ground continues to present the same favourable appearance as before. The object of ascertaining whether the rich surface deposits on the property are found in depth continues to be steadily pursued by the superintendent and those at the mine, but a little more time must elapse before a decisive result can be attained.

BON ACCORD.—May 25: Operations have been vigorously prosecuted, and principally consisted in carrying down the engine-shaft from the 40 to the 50, sinking two winzes from the 30 to the 40, on the winze lode, and driving on that lode north and south from the end of the 40, west from engine-shaft. The engine and pitwork continued to work well. The Burns directors visited their mine last week, and when in the neighbourhood walked over to the Bon Accord. Mr. Ayers (the secretary of the Burns) brought down some stones that he picked out of the stuff raised from the engine-shaft and levels driving therefrom in the 40, which determine, without a doubt, the existence of malleable copper and black and yellow ore in the lode, which has hitherto been only strongly stained with green. I think the problem is now in a great measure solved, and that the lodes in the Burns and Bon Accord will eventually prove to be continuous, although a deep bar or cross-course, has cut us off from any portion of their rich deposits near the surface. The country at their deep levels is identical with what is now showing at Bon Accord. Yellow copper has been almost simultaneously cut at both places, and although I have no particular authority to quote, I am convinced they are of opinion that the lode we are now working upon is connected with one called Aliens, in the Burns. You will see by reports that the ground is still favourable at the engine-shaft, and sinking to the 50 is progressing very favourably.

WORTHING.—May 25: The Bremer Mine was progressing favourably, the improvements in quantity and quality. The expenses in the last month, including 500t. for machinery and horseheads, were 1638s. 16s. 7d.; and 47 tons of regulus had been shipped per *Orwell* for London. Ore raised in the month, 110 tons.

DUN MOUNTAIN.—May 9: Since our last advises the *George Canning* has arrived here with the wagons and other materials for the railway, and a large portion has been landed in good order. From Mr. Fitz-Gibbon's report of the progress of the railway you will see that the work is advancing satisfactorily. The weather has been extremely wet, and caused a little delay, but the works have stood remarkably well, and the contractors will all complete within the time. We are about inviting tenders for the remaining seven miles from Wairoa Saddle to Brook-street, Nelson; and the time for the completion will extend to about four months from June next. We have now agreed for a right of passage with all the owners of land at the outskirts of the town.

WHEAL ELLEN.—May 23: The operations at the mine were going on satisfactorily, though some loss and delay had occurred by the overflowing of a creek on which the stamping and dressing machinery is situated. The local committee had visited the mine on May 1, and agreed to the following report:—"The local committee visited the mine on the 1st instant, and remained until the following day. They carefully inspected the works in progress, and made a partial survey of the property. The operations, as anticipated, were on a limited scale, but conducted with energy and judgment; and the fresh discoveries underground, and results from dressing-floors and furnace, afforded satisfactory promise of permanent prosperity to the company. Sites were determined upon for the erection of the engine, smelting-house, workshops, and other buildings; and plans, estimates, and minor details taken into consideration. The observations made confirmed a favourable opinion as to the character of the lodes, and tended to the conviction that suitable machinery and appliances would soon render the Wheal Ellen a profitable and important mine." Mr. A. Scott concludes his despatch as follows:—"On the whole, I am happy to state that my confidence in the intrinsic value of the mine is decidedly increasing, and, so soon as we get up the requisite machinery and other appliances, the returns, which are now very trifling, will begin to come forward in earnest."

ENGLISH AND AUSTRALIAN COPPER.—May 25: There were eight furnaces and two refineries at work. The stock of cast at the works was 2581 tons, and of firewood 4918 tons. The quantity of coal at Kapunda was 1820 tons. The make of copper and the other operations of the company were proceeding very satisfactorily.

GREAT BARRIER.—April 30: This company has received by the mail this week the following report on its copper mine, by Capt. Wm. Rowe, who was specially engaged to inspect it:—At the request of Mr. Heale, I accompanied that gentleman and Capt. Holman, on March 30, to the Great Barrier Copper Mine, and after a careful and minute examination, I beg to submit to you the following report:—I do not think it necessary to enter into any general description of the mine, or to refer to the geological characteristics of the formation in which the lode is found, as I presume that former reports will have fully informed the directors on these subjects; I will, therefore, confine myself more particularly to the recent operations at the mine, and to the means necessary for its further development. Since Capt. Trewren has had the management of the mine he has directed his attention more particularly to the proving of the lode below the adit level, and for this purpose a winze has been sunk on the course of the lode 12 fms. A shaft, 12 fms. north of the winze, has been sunk to a depth of 20 fathoms, and the 12 fms. has been extended in a northerly direction about 30 fms. The ground in the winze appears generally to have been of a favourable character, but towards the bottom of the winze the ground is not so grey as the average of the vein; the shaft, which has also been sunk on the course of the lode, has throughout been in grey ground of more than average quality. The level has been driven in a zigzag direction, and wherever it has intersected the lode the ground has been of the usual character; but beyond the point where it communicates with the shaft there is a decided improvement. The lode itself appears to be more concentrated, and the ground favourable. The present explorations, however, appear to me to be deficient in some important particulars. In a lode of such width and character as this is, all explorations should be of large size, but here this is not the case; the level is much too small, and might be driven of a much larger size, at an equal expense; but to prove the permanency or otherwise of any improvement in the lode recourse must be had to stopping, as without this it will be difficult to arrive at correct conclusions. A little has been done in the north hill, but this has been only on a small branch, and not on the main lode, and is, therefore, unimportant. The explorations, although not very extensive, yet show some results of a favourable character; they prove that the ground continues in depth, and that it does not deteriorate in quality; the ground is generally of a more favourable character; this is especially below the 12 fm. level, where it is both softer and of a lighter colour than usually met with. The lode appears to be more concentrated, and in the northern section of the explorations there is a decided increase in the quantity of ore. I am decidedly of opinion that the results of those explorations warrant their continuance, and there are two points upon which I think it necessary to be informed as speedily as possible—whether the ground continues to improve in depth

and whether the lode becomes more concentrated? I need scarcely say that should this be the case not only will the value of the mine be greatly increased, but the character of permanency will be stamped upon it. I would, therefore, recommend that the present shaft be sunk to a depth of 50 fms. below the adit level. If an engine should be required for pumping and drawing purposes, the one on the mine could be easily erected. I think this should be done as soon as possible, as there cannot be two opinions but that present appearances indicate improvement in these directions; and should this not prove to be the case, then the sooner all explorations below the adit level are abandoned the better; and I would remark that but slight general improvement is required in the lode to make the Barrier an exceedingly valuable mining property. The 12 fm. level should also be extended in a northerly direction, but for effective purposes it should not be less than 7 ft. in height by 4 1/2 ft. wide. The stopping above the adit level is carried on at present on too small a scale to be profitable. The dressing appliances are also of a very imperfect description. The crusher is greatly out of order, and is much too small. I believe that with proper dressing apparatus the cost of dressing might be reduced at least from 30s. to 21 per ton; and if so, then there are large quantities of ground above the adit level that might be profitably worked, but for this purpose there should be a powerful crushing-machine erected; at present nearly all the operations are performed by manual labour. This is generally unskilled, and high in price. A proper crushing machine, with the most approved dressing machinery, would greatly reduce this; and many of the difficulties will be overcome if this be done. I believe that there are thousands of tons of ore that may be returned profitably, but I could not recommend working it upon the present system. In conclusion, I would say that my favourable opinions of the Great Barrier Mine, expressed in my report some two years ago, are by no means shaken, but rather confirmed, by present operations; and if the steps which I have here indicated are taken, there is every prospect of those anticipations being realised; and I believe that present appearances call for a further development of the mine.

MINING NOTABILIA.

[EXTRACTS FROM OUR CORRESPONDENCE.]

Mining in Scotland seems to be progressing rapidly. At the West Kain, adjoining the Lochwinnoch Consols, a sett has been taken up by a private company, who commence on Monday next. The mines had been worked about 12 or 14 years since, when copper was very low. A bona fide subscribed capital has been lodged in the bank, which is deemed amply sufficient. We understand shipments of ore will shortly be made; the copper are cropping out at the very surface, enabling it to be wrought open, as the greater part of the late operations have been on dead work; the late rains will facilitate cartage, and we may look to having large parcels of ore at Port Augusta ready for shipment. Capt. J. B. Pascoe (May 17) reports.—"Since my last we have sunk the shaft D 11 fathoms below the deep adit level; we shall sink it 3 feet deeper, and then drive to communicate with the winze C in the 10, below the deep adit. As soon as we communicate with the winze C, we shall drive the 10 both east and west of the shaft, and take away the backs for ore. We have the lode standing by the side of the shaft to the surface; it is large, and shows good copper ore in all places where we have cut into it; this looks well, and I hope in another month to be raising a large quantity of good ore from this part of the mine. The lode on section 2 is 15 feet wide, composed of gossan and copper of good quality. The lode in section 5 continues good. We have sent to the port 40 tons of good ore (35 per cent.), and have 70 tons of same quality cleaned up and ready to send away; also, about 200 tons at the surface to dress up, which we shall push on, as there are many drays on the way up. We have plenty of rain and abundance of grass, so that we shall have plenty of cartage done. We have 95 men employed in all, and have 22 good miners from the Burra Burra near at hand, on the way up. I shall start a party of miners to the eastern mines immediately, so that the Nucceena, Oratanga, Wheal Stauri, Chambers' Consols, and the Morroo Mines, will all be working in ten days from this date."

WEST RHOESMOR AND EAST COED-YR-HENDRE.—I have just received a private prospectus of this mine, near Mold, and it is seldom an opportunity occurs in which, as a practical miner resident continually on the spot I can, without fear of scrutiny, speak with confidence of so promising an undertaking. It always becomes a pleasure to do so to those whose interests are identical with mining, for though, as in this case, I am quite unconnected with the company, yet I have confidence that, if a few more of this class of mines were undertaken it would eventually be the means of establishing a just value on this much-neglected district. We have here a junction of the best lodes and cross-courses which has served to enrich past generations that have proved productive on all sides, and yet untouched in this piece of maiden ground; and as I shall subscribe my name below, I shall be most happy to render any information on the merits of this sett, of which I can the more positively speak, having thoroughly inspected the renowned Hendre Wood Mine in the days of its prosperity, and of the measures which traverse the vein of iron from west to east. I shall be truly glad to see this property realise the most sanguine expectations of the adventurers who have undertaken it, and I trust it will be the means of infusing a more animated spirit amongst the mining community than has recently been given to poor (?) Flintshire.—WILLIAM FRANCIS: Bryn Griffith, near Mold, July 18.

WHEAL FREDERICK.—Under this title is about to be worked a tin mine situated on Dartmoor, and containing within the limits of the sett three lodes, possessing the requisite characteristics to induce trial of them. The mine will be divided into 2000 shares.

THE THREE CARADONS—SOUTH, EAST, AND WEST.—**SOUTH CARADON** is a good sterling English mine, and worked in a miner-like manner, with steady dividends and large reserves, and by the present mode of working is likely to continue for years; it is divided into 512 shares, and upon a paid-up capital of 11. 5s. per share has paid in dividends 346s. per share. The manager deserves very great credit for the way in which he has carried out this undertaking, the shareholders have every confidence, and their dividends are paid regularly, and without much variation. This is one of the best, if not the very best, copper mine in the county of Cornwall.—**EAST CARADON** is a young mine, and as far as it is opened out is one of great promise, but some of the writers in the public press have greatly exaggerated its worth. In the leading article of the *Mining Journal* last week the writer devotes a great space to the praising of this mine, and we will take his own words that the mine for the next year will pay dividends of 10s. per share every three months; this would be 27s. per share for the year. Now reckon this at a six years' purchase, and the price of the shares would be 127s. per share, whereas they are quoted at 24s. per share, or about 147,000/- for the mine—an enormous sum. Those who hold these shares are not very likely to get this money back again in dividends. The lode in the next level will not be cut for nine months, and suppose it should fail, where would the property be then? It is a promising mine, respectably managed, but very much too high in price.—**WEST CARADON**: "Ah! what a falling off is here." At the beginning of the year these shares were 80/- per share, they are now about 42/-, and very likely to go much lower. Here is a mine that has been worked upon the opposite principle to South Caradon; no sooner was a fine bunch of ore discovered than it was taken away as fast as possible, large dividends paid for a time, and the result is little or no reserves, lessened dividends, and great losses made by those who invested at the high price. According to the latest report the mine is looking very bad indeed. A respectable agent inspected this mine very lately for a shareholder, and he states that most of the ends are poor, and that he can see no more ore in Menude lode than is already in course of working; and, therefore, there are no reserves. He further states that he has carefully examined the different points of operation, and the ore ground available is very limited indeed, and that the present samplings cannot be kept up unless some discovery takes place, and of which he can see no immediate prospect. This, coupled with the bad report from the agents of the mine, looks bad indeed, and the directors of the mine would do well before the next general meeting to call in some respectable agent to advise with them relative to the future working of their property; if the ore is taken away as fast as is being now done, depend upon it instead of receiving dividends the shareholders will have to pay calls.

OLD TOLGS.—The lode in the 52 west continues to improve, about 5 tons of good copper having been drawn from that level during the week; the lode is 3 feet wide, producing full 2 tons of ore per fm., and the remainder of the lode is worth 5 cwt. of tin per 100 sacks. The lode in the 42 is 2 1/2 ft. wide, producing stones of copper ore, letting out much water, and improving.

SOUTH CARADON WHEAL HOOPER is much improved, and at last seems likely to become a mine of some note in this notable district. A lode is hourly expected to be cut in the north cross-cut, which is yielding much water. The driving at the 62, on the course of the lode, is yielding good stones of ore and improving, with most interesting appearances, such as have not been seen in any part of the mine before. Perhaps the most important change is in the engine-shaft, where the lode is inclining less; and as this seems the only general rule in mining throughout all districts alike—more vertical more mineral—it is to be hoped that with the patience here displayed and money expended good results are near at hand.

THE BRYNAMOR MINE (Nant-y-Mwyn district).—A deputation of the shareholders of this mine visited the sett, and went underground there, on Saturday last. They found all the machinery working exceedingly well, being new and in perfect order, and of excellent construction. This is a young mine, and the workings have not extended to much depth, but the lode seen in the winze, 11 fms. under the surface, and 4 fms. under the adit, is of the richest description, containing lead ore in large and massive cubes, filling branches 6 or 7 in. in width, through a lode 8 or 10 ft. wide, and yielding ore in large quantities. This seems like the upper section of a considerable formation of ore. It is in the neighbourhood of the great Nant-y-Mwyn Mine, the yield of which has been measured by hundreds of thousands of pounds, and it is not improbable that this may make a similar mine. The engine-shaft has not yet touched the lode; it has been sunk 4 fms. to intersect the vein, but the course is so porous that it is perfectly well drained by the engine-shaft, and it is probable that when the shaft is

driven to the lode a very rich discovery of ore will be the result.—July 17.

THE NORTH HAFOD, OR DEVIL'S BRIDGE MINES.—Agreeably with the determination we had formed and expressed in your last Journal, we took tourist tickets on Wednesday evening last, and, at 6 o'clock, on Thursday morning, started from Paddington, as a deputation of four of the company, to examine the North Hafod Mines, situated at the far-famed Devil's Bridge, in Cardiganshire. Passing through Birmingham, Shrewsbury, and Oswestry, we reached the termination of our railroad journey at Llanidloes, 20 miles from Devil's Bridge, and 29 miles from Aberystwith, at 3 P.M. After making a good dinner at Llanidloes, for we had no time to get any refreshments en route; and I would just say, *par parenthèse* here, that it would not be amiss for tourists who live by the common necessities of this life, taking this line to have a small hamper, lined with edibles and succulents handy, unless they wish to diminish their specific gravity during this hot weather, there being no time for refreshment on the rail. We started by coach for the celebrated watering-place of Aberystwith, where we arrived at 8 P.M.; and, in consequence of the exhaustion alluded to before, we laid in a good supper, visited the Castle, the Marine-terrace, and hunted up the Lions, which in that locality are more noted for their hospitality than any other quality. Early on Friday morning we were again on the road, under the tracings of two valiant horses from the Lion, and, amid a tremendous fall of rain, reached the Devil's Bridge, passing various lead mines, and glimpses of beautiful scenery far down below the bed of the Rhedol, the turnpike-road running on the banks of the river 1000 ft. above. At the Devil's Bridge we were in our own ground, and, although the rain came down in torrents, the views of the sparkling waterfalls seen through the mist seemed like magnificent pictures enclosed in leaden frames. It is impossible to describe the charming cataracts seen through vistas of 1000 ft. of perpendicular cloud and rain; and my fellow-travellers, not so much used to the beauties of the scenery this part of Wales presents, were very properly in ecstacies at these grand sights. But we had not much time to spare, as we had to pass through 1 1/2 miles of the sett from the Bridge to the workings. Arriving on the spot we found the miners busily engaged, one party in opening an old mining work of ancient but unknown date, in which the lode was to be seen, full of black oxide of iron and the chromates of lead, for 3 or 4 ft. big. This seemed a very promising vein; but we did not expect to find some nice lumps of solid lead ore in the old adit; and, when the work is further opened, in all probability we shall find its source in the workings

and encouraging for a good result. To-day I have carefully examined the lode in the said bottom, and it is looking well, being composed of spar, a little clay, carbonate of lime, and nice small stones of lead ore; I shall be able to give you a full report of the size of the lode in my next, after sinking a few feet. I intend to put two men to clear away the stuff out of the 60 yard level westward, as we find there is air coming from that direction; so it will be of great importance to ventilate this part of the mine, and by so doing we may easily meet with good courses of ore, as we have before at the western shaft; and if not so this work must be done. We have commenced the dressing-floors, and all is going on satisfactorily, so we shall push forward all operations with dispatch.

CENTRAL MINER.—W. Davies, July 17: We are again driving the 55, east of Edgworth's shaft, and the end looks very well, with spots of ore throughout. The stope in the back is much the same, worth 1 ton per fm. In driving on the joint which passed through the cross-cut we have some ore, but not enough to value. The ground in the new shaft is harder, and our progress is not so speedy.

CHARLOTTE UNITED.—B. Kendall, J. Pemberthy, July 13: The engine-shaft is within 1 fm. of the 80; the lode and ground in this shaft are looking very promising to make a deep run of ore ground. The lode in the 60, west of the engine-shaft, is 2½ ft. wide, yielding a little copper ore. The lode in the 60, east of the engine-shaft, is 3 feet wide, very kindly to make ore shortly. We are glad to say that we have an improvement in the 60, east of the engine-shaft; lode 2 ft. wide, composed of spar, rich black and yellow copper ore, worth from 40 to 50 per fm., and from the appearances we think we are coming into a run of ore ground. The cross-cut driving south at the 50 is a little harder, but the ground is looking more congenial for mineral. The shaft sinking on King's lode is 18 fms. below surface, and about 3 fms. from the adit.—TRENEW: We have fixed the plunger-lift at the 25, and dropped 10 fms., which we expect to drain next week. We are very glad to say the lode in the 25 south-east, and west of cross-cut, is looking very promising; we have opened it about 20 fms., and find the lode to be composed of spar, mudiic, and black copper ore. Norden's shaft, sinking on the lode, is down 10 fms.; in this shaft we have intersected a lode 3 ft. wide, yielding stones of copper ore. The 25 east, on the north lode, is very much improved in size, and we have no doubt that when we get a little nearer to the cross-course we shall find it more productive. Our tribute department is not looking so well as the ground is coming short, but we hope after a short time to open out some good ground, as we shall be pushing on our tunnel operations in both mines with all speed.

COLLACOMBE.—S. Mitchell, July 17: During the last week there has been no alteration in this mine to notice.

CROOKHAVEN.—H. Thomas, July 15: The south lode, driving west in the 40, is strong and promising, containing some very good yellow copper ore, and my decided opinion is, by extending west on the lode, good results will follow. The footwall of the lode is remarkably well defined. In the 40 cross-cut, north from engine-shaft, the end is passing through a fine channel of ground, with a slight underlie south; we are pushing on the cross-cut with as much speed as the nature of the ground will permit. At the western trial-shaft the men are making good progress with their bargain; the shaft will shortly be 10 fathoms deep; the ground is still of the most favourable nature, and promises well for a large mineral deposit at a reasonable depth. The engine-shaft men are not making so much progress as I could wish, in consequence of the air not being good. We must either have recourse to air-pipes or communicate the 40 with the engine-shaft near the 20, on the flockan lode. I would strongly recommend the latter to be done, as the most permanent mode of ventilation.

H. Thomas, July 15: Since yesterday a decided improvement has taken place in driving west on the south lode in the 40. I had some large stones of good yellow copper ore broken to day and sent to surface. The character of the stone in which the ore is mixed is such as to leave no doubt in my mind that we are not far from a run of ore ground; the end is easy of extension—3 ft. per fm.

CROWN LWM.—J. Roach, July 18: There are still spots of ore in the lode in the level driving west, but nothing of importance has yet been met with. From the appearance of the forecastle I believe we are now against some intersection; the smooth wall which we have met with will be broken through in course of a few days, when I will let you know the result.

CUDDRA.—J. Webb, A. Cundy, July 18: We are now come up from underground, and send you our report. The lode in the 100 east continues to open out ore ground; the leader part of the lode is 1 foot wide, composed of black ore and mudiic, worth about 50 per fm.; we have now passed through 5 fathoms of such value. Walker's shaftmen have put in a penthouse, and are now enlarging the shaft, pit, &c.; the other men are putting in siphon-pipes to take back the water to the engine-shaft. The stopes in the back of the 60 are without much alteration; they will turn out much stamps' work, worth about 1½ cwt. of tin per 100 sacks. The 60 east west men have been cutting out under the lode in the killas, and will soon take down the lode; the last taking down of the lode for 2 feet in width was very rich for tin. The stopes in the 30 are yielding stamping work, mixed with good stones of tin. The 20 fm. level is still being driven west under the lode.

DALE.—Robert Ninnes, July 13: The lead ore raised during the week is estimated at 5 tons; estimated value per ton 117. The value of the Pipe vein per fathom at this date is 1107. The distance driven or stoned in the vein during the week is 3 ft. We have sunk in the new shaft 5 ft.

DEVON AND CORNWALL UNITED.—T. Neill, July 18: We hope to communicate the rise in back of the deep adit level with the shaft this week, after which we hope to make good progress in driving under the ore ground driven through in the Midway level.

DEVON NEW COPPER.—P. Hawke, July 17: We have reached the wall of the northern portion of the great north lode, in the 78, and in breaking it through have obtained some kindly ore stuff, but having had a stop of ground to put forth very little could be done for some days; this piece of work is all but completed, and by to-morrow we shall be pushing on in order to ascertain the character of the lode beyond the point alluded. I have forwarded a small box of the ore stuff obtained from the improved part of the lode now reached, and would without any hesitation say that the nature of it is decided superior in its character to anything that I have hitherto witnessed in the mine. The lode is assuming a different appearance in this level, compared with the prospects in the levels above, the composition being pretty quartz and crystal, closely set with stabs of mudiic and yellow copper ore.

DRAKE WALLS.—T. Gregory, July 17: In the 102, east of Mathew's shaft, we have gone through the cross-course, but have not as yet intersected the branches to the east of it; probably it will occupy a week to do this. In the 92 east the branches are producing saving work for tin. The branches at the Tye level east are producing tolerably good work. The branches in the 80, west of Breton's shaft, are producing saving work. In the 70, west of Breton's shaft, the branches are producing good stones of tin, with a little copper ore. The branches in the 60, west of Breton's shaft, are producing good work, and the same may be said of the 50, west of Breton's. At the 40, west of Breton's, we are cross-cutting north in very favourable ground, but as yet have made no discovery; the stopes in this part of the mine have improved. We have intersected the north lode, west of the cross-course, referred to in our last report, and have cut into the same about 2½ feet, which is composed of capel, quartz, mudiic, and a little ore.

EAGLEBROOK.—H. Tyack, July 18: The men engaged in the 20 have cut through the lode, which has produced some very good stones of lead ore; I have now put the men to drive the level westward, where we may expect to find some good ore, as the ground dips fast to the westward. In the stopes over the 20 the lode is producing more lead than when last reported on. In driving the 30 west the lode has increased in size, and the water now issues from the north part of the lode, instead of the south as before; and altogether presents an excellent appearance for making a good deposit of lead ore, being composed chiefly of white soft spar, with good spots of lead in it. We have now in the bins above 3 tons of cleaned ore, and proceeding regularly with washing of it. We have a good supply of water, and our reservoir is full.

EAST BERTHA CONSOLS.—S. Cook, July 15: The engine-shaft is sunk 30 fms., and levels extended east and west on the course of the middle lode. The east end is driven 7 fms., and west 15 fms. from the shaft; the lode is 3 ft. wide, composed of gossan, quartz, peach, and copper ore.—South, or Lady Bertha Lode: A cross-cut is driven 21 fathoms towards this lode, in the 30; at surface it is 5 ft. wide, of the most promising description for large deposits of copper ore, and being east of the great cross-course we expect great results.—North Lode: The cross-cut is extended about 12 fms. through a beautiful channel of ground, highly mineralised, and have several branches dropping towards the lode, which we hope to cut within a month. The engine and connections are in good order, and capable of sinking the mine 70 fms. below our present depth.

EAST CAERN BREA.—T. Gianville, July 17: In the 50, west of the cross-cut, the lode is 2 ft. wide, composed of spar and yellow ore. In the 50 east the lode is 18 in. wide, yielding good stones of ore. In the 40 east the south lode is yielding 2 tons of ore per fm. In the 40 west the lode is yielding 4 tons of ore per fm. We have suspended the driving of the 26 west for the present, and are now sinking a winze, to communicate with the 30 cross-cut, driving south from the western shaft, in which the lode is yielding 2 tons of ore per fm.

EAST CRINNIS AND SOUTH PAR CONSOLS.—F. Puckey, C. Merrett, July 15: In driving the 150 cross-cut, south of the engine-shaft, we have cut a lode 4 feet wide, composed of quartz, mudiic, and spots of copper ore, but not of sufficient quantity to pay for working; we shall now drive a few fathoms west on the lode to see if it will improve. In the 150 cross-cut, north of the engine-shaft, we expect to be getting near the main lode, as the end is letting out more water; we hope to cut the lode next month. In the 125, east of Smith's shaft, the lode is 4 ft. wide, but still disordered, letting out a large stream of water, and producing a little copper, but not sufficient to value. We have commenced the driving of a cross-cut, north of this level, to intersect the same lode west of the cross-course, which we expect to accomplish in about two months. The lode in the winze sinking below the 112 east is 2 ft. wide, and will yield 2 tons of ore per fathom, worth 60 per ton; the lode in the stopes in back of the same level is 6 feet wide, and will yield 4 tons of ore per fm., worth 60 per ton. The lodes in the 100 and 112 ends are without alteration.

EAST GUNNIS LAKE AND SOUTH BEDFORD.—J. Phillips, July 18: The lode in the 36 is worth 4½ tons of good ore per fm.; the lode is full 7 ft. wide, and kindly. We have begun another winze in bottom of this level, about 25 fms. east of No. 2 winze. The lode in the bottom is at present worth 3 tons of ore per fm. We have changed the pit-work in No. 2 winze, and it is now in full course of sinking for a 36 fm. level, by eight men. The rise in back, to communicate with the ventilating shaft in the deep adit, is set to six men. The 24 is being driven by six men, by the side of the lode. The deep adit is driving by six men; the lode here is not quite so productive, but very kindly. We are still in very hard capes in the cross-cut north in the shallow adit, but they are spotted with red and black oxide of copper, and malleable. Gard's shaft is sinking by nine men, between the main lode and the south branch. There are several small branches of ore in the bottom of the shaft, falling into the main lode.

EAST ROSEWARNE.—J. James, July 13: The ground in the 55 cross-cut is without change to notice. In the 45 east we have a good branch of ore towards the bottom of the level. We have put the men to open on a branch gone north from a little behind the end, which we think is the main part of the lode; it produces good stones of ore, and the water is issuing freely. In the 43 west the lode is 1 ft. wide, of a promising character, and worth about 77 per fm. King's shaft, and the 22 cross-cut are progressing favourably. There is no change to report on in the tributary department.

EAST TREFUSIS.—J. Pope, July 18: In the 05, east of cross-cut, on Trelewlyn's lode, the lode is 18 in. wide, consisting of spar, chlorite, and a little copper ore, but not in sufficient quantity to put any value upon. In the 34, east of cross-cut, on Trelewlyn's lode, the lode is 3 ft. wide, producing occasional stones of copper ore, quartz, and gossan. In Trelewlyn's flat-rod shaft, sinking below the deep adit, the lode is 3 ft. wide, yielding stones of copper ore, quartz, and fluor-spar. No lode has been taken down in the 22, west of the cross-course, on Smith's lode, since my last advice.

EAST WHEAL RUSSELL.—J. Goldsworthy, July 17: Homersham's shaft is sunk about 5 fathoms below the 110 fm. level; ground favourable for progress. In the 110 fm. level cross-cut north the south wall of the north part of the lode has been intersected and cut into some inches; the lode as far as seen is composed of capel, quartz, and iron, with spots of grey copper ore; the ore-bearing part of the lode, as seen in the 100 fm. level, above, is about 3 or 3 feet north of the present cross-cut, which we hope to reach in a few days. In the 100, east of Davis's cross-cut, the lode is 3 feet wide, composed of prian, peach, and capel, and produces a little yellow and black copper ore, with a kindly appearance. In the 100, west of Davis's cross-cut, the lode is 3 feet wide, com-

posed of quartz, prian, and ore, and produces 1 ton of the latter per fm.—a kindly looking lode. At John's, or new winze, sinking in the bottom of the 100, west of Oats's No. 1 winze, the part of the lode carried is 4 ft. wide, worth 107 per fm. The stope in the back of the 100, east of Oats's No. 1 winze, is worth 127 per fathom. The stope in the back of the 100, west of Oats's No. 2 winze, is worth 107 per fm. The stope in the bottom of the 88, on the north part of the lode, west of Benney's winze, is worth 127 per fm. In the 88, west of Hitchin's engine-shaft, the part of the lode carried is 1½ ft. wide, and produces rich stones of ore, with a kindly appearance. The lode in the 66 east is 2 feet wide—unproductive. The lode in the 66 east is presenting a kindly appearance, and produces a little yellow copper ore; we fully expect to see an improvement in this end shortly.

—I. Richards, July 18: Homersham's shaft is about 5 fms. below the 110, in ground favourable for sinking. In the 110 cross-cut north, east of Homersham's shaft, the lode is being cut into, and, so far as opened on (about 2 feet), is very promising, being composed of capel, quartz, peach, prian, and a little ore, but not enough of the latter to value; I have no doubt, however, judging from the level above, that there is a more productive part still further north. In the 100, east of Davey's cross-cut, on the north part of the lode, the lode is 3 feet wide, composed of capel, peach, quartz, and a little ore. In the 100, west of Davey's cross-cut, on the north part of the lode, the lode is 3 ft. wide, composed of quartz, prian, and about 1 ton of ore per fm. John's winze, in the bottom of the 100, west of Oats's No. 1 winze, is about down 6 ft.; the part of the lode carrying is from 3 to 4 feet wide, composed of capel, quartz, and ore, worth 1 ton per fm. The lode in the stopes in the back of the 100, east of Oats's No. 1 winze, is worth 127 per fm. The lode in the stopes in the back of the 100, west of Oats's No. 2 winze, is worth 107 per fm. The lode in the stopes in the bottom of the 88, west of Benney's winze, on the north part of the lode, is worth 127 per fm. In the 88, west of Hitchin's engine-shaft, the part of the lode carried is 1½ ft. wide, and produces a little yellow copper ore; we fully expect to see an improvement in this end shortly.

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NANTEOS AND PENRHIN.—H. Boundy, July 19: Eystumtean: In the 10, below adit, both east and west, only a part of the lode is being carried, so I am quite unable to set a true value on it before the lode is all taken down, which will be done in the course of a week or ten days: I think the best part of the lode is standing. Reese's level, east of cross-cut, is again improving, worth now 8 cwt. of ore per fm. In Rowe's level west the lode in the drivage is nearly all muddle, but there is some lode still standing on the north of the level, which I have ordered to be taken down in the next week. The stops in this part of the mine on an average are yielding from 8 to 10 cwt. of ore per fm.—Bwlchwyn: The 30 east is yielding 8 cwt. of ore per fathom. Tribute price varying from 7d. to 7s. 10s. per ton.

H. Boundy, July 19: In reply to your letter of June 27, respecting the 30 east, at Bwlchwyn, I beg to inform you that we shall be in a position to stop the ore ground which we are now passing through in the course of another month. We have plenty of air, and every facility for working above this level. I should like to see this level extended a little further east before I would recommend the driving of the 40. An inquiry to yours of June 29, we have fixed pipes in the shaft at Eystumtean, which have quite remedied the foul air, so we shall not be affected again on that point either in driving or sinking.

In reply to yours of July 10, respecting Capt. Paul's report, he only valued as much of the lode as was to be seen in the drivage. I would here remark that since we cut through the lode in the bottom of the shaft only a part of it has been carried in the drivage; the lode standing will be stripped down in the course of a week or ten days, when you shall be duly advised of its value.

The 30, at Bwlchwyn, is just the same as it has been for some time past, worth about 8 cwt. of ore per fm.

NETHER HEARTH.—W. Vipond, July 13: We have been cross-cutting both north and south this week from the end, and have found the limestone on both sides. The lode at this point is 25 ft. wide; near the south wall we have good ore setting up about 2 ft. above the bottom. We have come down upon a bed to-day in Robinson's engine-shaft; whether it will prove to be the bottom of the hazel or not I cannot say.

NEW CROW HILL.—The lode in the 35 is now opened out for 14 ft. in width, and no south wall, yet the whole of this size is fair work for stamps, and we have set to eight men to stop away as directed, at 60s. per cubic fm.; we shall thus open further south, and extend eastward. The extra man put on will prepare a stock of work for the new stamps. The pitch in the 15 has little or no variation. After examining the old level east at the 85 we find that a new level can be driven at a much less cost, and we have set this level to drive by two men, at 40s. per fathom. The ground in the shaft is favourable, and the stamps are working well.

NORTH BASSET.—T. Glynville, G. Davy, July 17: In the 132, west of the cross-cut, the tin lode is worth 10s. per fm. In the 82, west of Grace's shaft, the lode is yielding 1 ton of ore per fm. In the 42, east of the cross-cut, the lode is 1 foot wide, composed of gossan and black and grey ore.

NORTH BULLER.—J. B. Daubridge, July 13: In the 100, driving west, we are driving by the side of the lode, as we can make more speed in driving; ground favourable. In the 78 west we have taken down the lode to-night; we find the lode in the end from 8 to 10 in. wide, yielding stones of tin and blende; ground favourable for driving. In King's flat-roof shaft the sumpmen have been cutting ground for plat, bearers, and cistern, for the plunger-lift, which they will complete by the end of next week, then commence to sink with all speed. In the 42, east of King's, the lode is 2 ft. wide, composed of soft quartz, prian, munde, and a little copper ore; ground favourable for driving. In the 42, west of King's, the lode is from 6 to 8 in. wide, poor. The engine is working well.

NORTH DOWNS.—F. Pryor, July 17: The following are our prospects of this mine: We are driving the 40 east and west; but it will take us a little longer to get out of the influence of the cross course. The 50 west, which is now 30 fms. from King's shaft, is worth 20s. per fm.; price for driving, 4s. In the 50, east of said shaft 32 fathoms, the whole of this drivage has been over ore ground, worth on an average not less than 40s. per fm.; the present end is now under the course of ore which I before referred to as gone down from the 40 end, and is worth full 90s. per fm. The winze sinking below the 40, still further east, is worth full 20s. per fm. No. 1 slope, west of shaft, is worth 30s.; No. 2, 70f.; No. 3, 70f. On the whole, the mine never looked so well.

NORTH FRANCES.—F. Pryor, July 12: The sump-shaft is down 7 fms. below the 25 fm. level; at this point we have a change for the better, both in the appearance of the lode as well as in the channel of ground; price for sinking 16s. 10s., former price 31s. per fm., now in the granite. Hunt's shaft is still in the cross-course, and presents much the same appearance as for some time past. The 60 west is a shade better in appearance; in the eastern end the lode is producing good stones of ore, and it is our opinion the next level will do something better for us.

NORTH MINERA.—P. Thomas, W. T. Harris, July 18: Our mine never looked better than at the present time: we have sampled 50 tons of ore, and discovered what appears to be a new branch or lode, running at right angles with the lode from which we have made our returns: it is very promising, and if it continues as at present it will produce from 4 to 5 tons of ore per fm. This with the ore from Wilson's shaft, in addition to our previous discoveries at Pugh's, will enable us to increase our returns.

NORTH NANT-Y-MWYN.—J. Thomas, July 18: The lode is now 6 ft. wide, composed of a beautiful white flonk and solid stones of lead ore, looking very kindly, and the ground is highly mineralised, and of the same character as the Great Nant-y-Mwyn Lead Mine, which is within 2 miles from our mine, and has for centuries been working to a good profit, and at present looking splendid. As we continue to drive into the hill we are opening up good tribute ground, and we expect the lode will become more regular. There are still good branches of lead ore dropping into the main lode from the north wall. There is no change in any other part of the mine since last report. The shareholders can now rest satisfied that they have got a good property, and I am confident that North Nant-y-Mwyn Mine will soon be in the Dividend List.

NORTH WHEAL ROBERT.—W. Godden, July 18: We have intersected the No. 2 south lode, east of Trial shaft, at the 42; as far as we can see the lode is about 18 in. wide, composed of quartz, munde, prian, and spots of copper ores, but not enough seen at present to value. We have intersected also the south part of the lode at the 20, about 6 fms. east of where seen a short time since; the lode is worth 2 tons of good ore per fm.; this is a good improvement. We shall continue to drive the 20 cross-cut north, to see if the north lode, which we hope to see this month.

NORTH WHEYAL VOR.—R. White, July 15: We expect to hole the winze to the 80 in a day or two, which has been reset to six men. In the 70 the lode is not yet in the cross-cut south, but must be close at hand, now driven about 11 feet. The 80, in the western stope from the rise, looks well; set to four men, at 35s. per fm. The east stope is yielding good stamping work. The lode in the end east is much improved, and now producing good stamping work. In Heneage's shaft the lode is 2½ ft. wide, with a good appearance. The machinery, &c., all in excellent order.

NORTH WREY.—T. Kemp, July 18: The men continue to make fair progress, although the ground is not so favourable for sinking, having become a little harder. We have had a good supply of water for our wheel during the past week, and have been enabled to keep the water down in the old shaft to the 28.

OKEL TOR.—W. B. Collom, July 18: In the 80 east we are driving the south side of the capes; the ore part of the lode is 18 in. wide, and with every appearance of this being the commencement of another course of ore. The stope in the back will yield about 4 tons of ore per fm. The lode in the 65 east is poor at present. The rise in back of this level will yield 8 tons of ore to the fathom. In the 65 there has been no lode taken down in the end. The stope in back will average 4 tons of ore per fm. The stope in bottom of the 50, east of winze, will average 10 tons of ore per fm.

OLD TOLGUS.—W. Gilbert, July 18: The lode in the 52 west is further improved; it is 3 ft. wide, and is producing 2 tons of good copper ore per fm., and the rest of the lode is producing 55 lbs. of black tin to the ton of stuff, or 5 cwt. of tin per 100 sacks, and still improving. The lode in the 42 is 2½ ft. wide, and is producing stones of ore and tin, and letting out much water. We look for an improvement here, as the end is nearly under where we had such a large lode in the 32, and where the several parts of the lode united. The 32 west is a little improved; lode 9 in. wide, and producing stones of copper ore. The 52 west, on new south lode, is just as last reported.

PANT-Y-PYDEW.—R. Nankivell, July 18: We have commenced to clean the 54 ft. of whom-shaft. After clearing this level we shall drive on the end, so as to intersect the Gallop lode, which is only a few yards before the present end. The Gallop is a large swallow lode, and can be worked in many places at a depth of 150 yards deep. There are large deposits of ore in flats and joints connected with this lode. Some of the directors and shareholders have been on the mine this week, when I pointed out to them the importance of proving this lode before going to the expense of an engine; they then decided to suspend the workings at Kendrick's shaft for a short time, and push on the 54 fathom level with all speed.

PEDN-AN-DREA.—W. Trezay, July 13: The 110 east is producing stones of tin. The 100 east is yielding coarse tinstuff. The stope in the winze in bottom of this level is worth 40s. per fm. The 100 west is worth 4s. per fm. The 90 west is poor. In the 90 west rise we have risen through about 8 fms. of productive ground, but as we approach the level above the lode appears coarser; about 4 to 5 fms. more to rise to communicate with the 68, when this tin ground will become available. The 90 west, on Skinner's lode, is worth 6s. per fm.—Street and Bung's: In the 47 east the lode is 4 ft. wide, yielding coarse tinstuff. The 40 east is worth 10s. per fm.

PENDEEN CONSOLS.—W. Eddy, J. Warren, July 13: We are getting on as fast as possible in getting the engine to work, and expect to be in order to-morrow about 12 o'clock at noon, and get the water in fork by Tuesday morning. We have not taken down the lode in the past week at any of the stope. In the 100 south the lode is 2 ft. wide, according to the parcel assayed is worth 8s. per fm. for tin. In other parts of the mine since last report.

W. Eddy, July 15: The water is in fork again to the 118, and by Friday we expect to have the other boiler.

PENHALDARVA.—S. A. Pope, July 16: In the 60 north the leader part of the lode is about 1 ft. wide, composed of soft spar, prian, munde, and spotted with lead. In the 50 north the leader part of the lode is about 15 in. wide, producing stones of lead. In the winze sinking below the 60 south, on the east branch, the branch is 4 in. wide, producing stones of lead, but not enough to value. The adit cross-cut north is driven about 15 ft. from the first.

ROSEWARNE CONSOLS.—J. Richards, July 16: The engine-shaft will be completed to the 40 in a day or two. The ends both east and west of the shaft are set at 35s. per fm.; the lode is 1½ ft. wide, with stones of ore. The 20, driving east on the caunter, is set to three men and three boys, at 42s. per fm., for as much as they can drive in the month; the lode is 1 ft. wide, with stones of ore. The new shaft (Ellen's) is sinking under the 10; bargain not completed. This shaft has taken us longer than we calculated, by reason of the great quantity of water. We have twelve men at tributes varying from 8s. to 12s. in 11.

ROSEWARNE UNITED.—E. Carthick, July 18: In the 90, west of footway shaft, the lode is 2 ft. wide, unproductive. In the 90, east of Jennings's shaft, the lode is 2½ ft. wide, worth 4s. per fm. In the 80, west of footway shaft, the lode is 2 ft. wide, impregnated with ore. In the 80, east of Jennings's shaft, the lode is 2½ ft. wide, worth 3s. per fm. At Richards's shaft, in the 74, we are driving south to cut the lode. In the 58, west of Richards's shaft, the men are rising; lode 6 ft. wide, composed of munde, and producing stones of copper ore throughout. In the 34, west of Richards's shaft, we are driving to cut the north part of the lode. In the 34, east of Lane's shaft, the lode is 3 ft. wide, producing good stones of ore, and looks more promising. In the 22, at Wellington's shaft, we are cutting plat, and shortly shall sink the shaft below this level.

SCORRIER CONSOLS.—J. W. Crase, Thos. White, July 18: The engine-house and stack are completed. The masons are now engaged in building loading for fly-wheel and bob-stan, which will be completed in about a week from this time. Nearly all the engine is delivered on the mine, and the engineers are preparing to put in the same with all possible speed. The engine-shaft is sunk 25 fms. below surface. In the last 6 ft. sunk the ground has been much harder than usual, but we are glad to say it is again improving. The water has considerably decreased in the past fortnight, and we have no doubt of being enabled to continue sinking this shaft until the engine goes to work.

We have commenced driving the 18, east of shaft, on No. 2 lode, to prove the tin discovered in sinking the shaft, where we hope to open profitable ground. The men are making good progress in clearing the adit.

SIGFORD CONSOLS.—W. Hoaking, July 17: The lode in the 24, driving west of the engine-shaft, is much improved. We have taken therewith within the last few

days some splendid stones of copper ore. The adit level, driving east on the north copper lode, continues to produce good work for copper; the lode continues its width of 3 feet. The sinking of the shaft on this lode is being vigorously proceeded with.

SOOTRIDGE CONSOLS.—E. Jackson, July 18: In the 62 west the lode is 2 ft. wide yielding a little ore. In Mayne's rise, in back of the 50 east, east of Crew's cross-cut, on the south part of the main lode, the lode is worth ½ ton of ore per fathom. In the 50, driving south-west of Crew's cross-cut, and west of the eastern cross-course, no lode has yet been met with. In the 40, east of Head's rise, on the south part of the main lode, no lode has been taken down this week. In the 30 cross-cut south the ground is favourable for driving. In the 20, west of Arthur's cross-cut, on the south part of the main lode, the lode is worth 1 ton of ore per fm.—No. 2 South Lode: In the 50 west the lode is small and unproductive. In Blanchard's stope, in the bottom of the 40, the lode is worth 1 ton per fm. In Rowe's stope, in the back of the 40 the lode is worth 2 tons of ore per fm. In the rise in back of the 30 the lode is worth, for 9 feet in length, 15s. per fm. There is no alteration in any other part of the mine.

SMITH'S WOOD.—W. Hosking, July 17: We have completed the excavation of the ground for the wheel-pit, and have every kind of material on the spot requisite for building the same, and expect the masons to commence building the walls in the course of a few days. In opening on the back of the great north the lode we are breaking splendid work for tin. Everything connected with the working of the mine is being pushed on with all possible speed.

SOUTH BRYN GWIOL.—J. Lloyd, July 16: Dunford's shaft is sinking by four men, and is down about 5 yards, in a strong lode, considering that it is in the barren measure. The east level from the old shaft is rather hard, and the ore is still carrying on without much alteration to note.

SOUTH CADRON WHEAL HOOPER.—W. C. Cook, July 13: In the engine-shaft the lode is going down more perpendicular, and is letting out more water; the ground near the lode is also a little softer; these changes I regard as being very favourable.

The lode taken down in the 62 west is not quite so large, worth now about ½ ton of ore per fathom; the character of the lode is very good, and I think will improve again very soon; it consists of copper ore, munde, can, spar, and peach, and it is my impression that it is in connection with a large bunch of ore; the character of the granite about the lode is everything that can be desired for the production of copper ore—in fact, I have never seen better. In the 47 cross-cut north the ground over the slide is a little harder; there is a small stream of water coming from the end, which indicates a lode or branch near at hand. I have re-set this end at 12s. per fm., former price 13s. per fm. The winze sinking below this level is progressing favourably.

SOUTH CRENERY.—E. Chegwin, July 16: In the flat-roof shaft, sinking below the 105, the lode is 1½ ft. wide, producing stones of ore. In the 105 east the lode is 1 ft. wide, producing good stones of ore. Our tribute pitches are not looking so well.—South Mine: In the 51, east of cross-cut, the lode is 3 ft. wide, producing good stones of tin. In the 51, west of cross-cut, the lode is 3 ft. wide, producing munde and spots of tin.

SOUTH DARREN.—J. Boddy, July 10: During the past three months the engine-shaft has been sunk 6½ fms. below the 70, the lode at present being 2 ft. wide, worth for copper and lead 12 cwt. per fm., with a very promising appearance. I hope to get the shaft down to the required depth in two months from this time. The lode in the 70 end east is 2½ ft. wide, containing a dark clay-slate, copper, and lead ore, valued at present at ½ ton per fm., and looking kindly for an improvement as we advance. There are at present being worked four stope in back of the 70, both east and west of the shaft, which are valued at from 6 to 20 cwt. of ore per fm. The lode in the 60 end east is 4 ft. wide, composed of a dark clay-slate, carbonate of lime, copper, and lead ore, valued at from 12 to 14 cwt. per fm., and presents every indication for a further improvement in the level progresses; this looks favourable for the 70 driving east. The lode in the 60 west is about 18 in. wide, and spotted with lead and copper ore, but not enough at present to value; however, the lode at this point has a very kindly appearance. The lode in the 30 east, on the north lode, is 2 ft. wide, containing a little ore, and looking much more promising than for some time past. The lode in the same level, driving west, is at present small and unproductive. The lode in the 20, west of air-shaft, is 9 in. wide, containing good lumps of lead ore occasionally, but not enough as yet to value. The lode in the 20, west of the air-shaft, is 18 in. wide, valued at present at 6 cwt. of ore per fm., but, judging from its appearance, I think an improvement will soon take place. The winze sinking below the 10, west of the air-shaft, is down about 6 fms.; no lode has been taken down here. Should the ground continue favourable for progress, I hope to have the winze holed in about two months from this time. The tribute department is much the same as for some time past. We have not met with any more lode in the trenching since my report of last week. On the whole, our prospects here are a little more cheering.

SOUTH DOLCOATH AND CARNARTHEN CONSOLS.—W. Roberts, July 16: In the shaft sinking under the adit level the lode continues 1½ ft. wide, producing good stones of grey ore. In the 50 cross-cut north nothing new to report.

SOUTH WHEAL BETSY.—Wm. Stephens, July 15: The cross-cut, south of Ley's shaft, has been driven 2 fms. 1 ft. 10 in.; the ground therein is composed of a strong capel and spar, and set to six men, at 14s. per fm. The cross-cut north has been driven 1 ft. 5 in. 7 ft. 1 in.; the ground therein is composed of capel and strings of munde, and set to six men, at 14s. per fm.

SOUTH WHEAL KITTY.—J. Borlase, S. Mitchell, Jun., July 12: The deep adit end is now reached, which is about 15 fathoms from Webb's shaft; the lode is 13 inches wide, producing saving work for tin; driving by six men, at 60s. per fm.; 4 fathoms from the present end there is part of the lode standing in the back, about 10 in. wide, worth 40s. per fathom, and retains the same in the bottom of the level. At White Thorn shaft the lode is 6 in. wide, worth 5s. per fm. for tin. At the engine-shaft the men have secured and timbered 7 fms. from surface; the lode in the bottom is worth 8s. per fm., and of a very promising character; the men are sinking this shaft with all possible speed. We are happy to add that the mine is looking exceedingly well through out, and it only requires a small steam-engine to develop it, when sales of tin will soon be effected. We have inspected two very good steam-engines, with stamps attached, within a few miles of the mine, either of which can be purchased on very reasonable terms. Of course this matter will be settled at our next meeting.

SOUTH WHEAL TOLGUS.—July 17: Youren's Lode: The lode at Michell's engine-shaft, sinking under the adit level, the lode continues 1½ ft. wide, producing good stones of grey ore. In the 50 cross-cut north nothing new to report.

SOUTH WHEAL TOLGUS.—J. Webb, July 17: The engine-shaft is down 17 fms., 1 ft. 8 in. wide, showing the same kindly appearance, and producing good stones of ore. The tributaries are busily engaged in dressing their ores, and about 20 tons are already carted to quay towards the sampling.

WEST PAR.—J. Webb, July 17: The engine-shaft is sunk 3 fms. We have two men continuing in the adit level north-east. During the past week we have had men putting in the engine in repair.

WEST POLMEAR.—W. Body, July 18: The 20 cross-cut, south of the engine-shaft, is driven about 32 fms.; the ground is composed of killas and floors of spar. In driving about 8 fms. further we expect to intersect the first lode. The 20 west of the engine-shaft, on the north lode, is driven about 21 fms.; the lode here is 1½ ft. wide, composed of spar, munde, and peach. The 20, on the north lode, is driven east about 17 f

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stuff; about 12 fms. behind this end there appears to be tin ground for 5 fms. in length; we shall begin at once to stop the back, and sink a winze in the bottom, and hope next week to report on its value, and to clear the 40, where we expect to find the ground. The cost of the mine for the future will be principally in opening ground. Our water is very little; the engine stopping one-half the time.

WHEAL KITTY (Lelant).—W. Williams, July 18: Gowen Lode: The lode in the 40 end, west of Wickett's shaft, is worth 3d. per fm. The lode in the 40 end, east of Wickett's shaft, is worth 6d. per fm. The lode in the 40 ends, east and west of winze, 14 fms. east of Wickett's shaft, is worth 3d. per fm. The lode in the 30 end, east of Wickett's shaft, is producing good stones of tin, with every indication of improving. The lode in the 40 end, east and west of winze, 16 fathoms west of Wickett's shaft, is worth 3d. per fm. Phillips's shaft is down 12 fms. below the 30, and we shall commence to drive east and west in a day or two. The winze 20 fathoms east of Phillips's shaft is down to the 40, and we have commenced driving east and west on a lode worth 4d. per fm. The lode in the 30 end, west of Phillips's shaft, is at present small, and not of any value. There is no change to notice in any other part of the mine.

WHEAL NORRIS.—J. Nance, J. Andrews, July 13: Setting Report: The Cremona engine-shaft let to six men, to sink below the 15 for bearers, cistern, and trip-plat, at 6d. per cubic fathom. The 15 cross-cut to drive north to six men, at 11d. per fm.; and to drive south to six men, at 10d. per fm. In consequence of the breakage of the winding windlass at Carter's engine-shaft last night the sinking of it has not been re-set to day; we hope to get it replaced by a new one from the foundry Monday next. The adit cross-cut is let to drive north from the No. 3 lode to six men, at 50s. per fathom; this cross-cut has been extended 12 fms. towards the flat-rod shaft lode. We have let to two men to drive east on the lode recently cut in the north cross-cut from Carter's shaft, at 80s. per fm.; this appears a strong, promising lode, and, judging from its character and bearing, there is no doubt but that it is a continuation of Vivian's lode in Craddock Moor Mine, that is there yielding the whole of their returns. At the flat-rod shaft, we have let the 15 to drive west to six men, at 60s. per fm.; to drive east, at 90s. per fm., to two men; and to stop the back, at 40s. to four men. We have let only one stop in the back of the adit, on the No. 3 lode, to four men, at 60s., and the other six men we purpose to employ in stopping the bottom of the said adit. We have to clear some rubbish lodged in a sink made by the ancients below the adit level, to the west of the little cross-course. The tin ground where we have been stopping is situated to the east of the said cross-course. We hope to find tin ground of some importance in the bottom of the said sink, and expect to find it now drained by Carter's shaft, which is now sunk 11 fms. below the adit level. We have also let a bargain to four men to extend the south cross-cut beyond the No. 3 lode, at 22s. 6d. per fm.

WHEAL POLLARD.—W. C. Cock, July 15: The 55 cross-cut south continues hard; re-set 1 fm., at 15d. per fm., the former price. The 35 cross-cut north is still in elvan, which is letting out a great quantity of water; re-set at 20s. per fm., stent 1 fm., or cut through the elvan course; the recent advance given for this end is more in consequence of the water than the hardness of the ground, which makes it very troublesome for driving. I have just had the position of a lode pointed out to me in the north part of the shaft, and intend having a pit or two opened on it; I am told it is a strong champion lode.

WHEAL PROSPER.—J. Hosking, July 18: For the last few days the shaftmen have been cutting ground for the bearers and fixing them, and preparing to drop, so we have drained as far as we have dropped the lift. The water is to the same level in this mine as West Prosper. The engine is working to keep the coming water eight strokes per minute. I think they are going to try the other engine this afternoon.

WHEAL PROSPIDINICK.—R. Kendall, R. Sinoock, July 13: The lode in Wilson's shaft is yielding some good stones of tin; we think the lode is changing for the better; sunk 5 ft. this week, and put in the rods. The 10 west is much the same. We are happy to say the lode in Watson's shaft is 15 in. wide, worth full 10f. per fm., still improving, and a better quality; sunk this week 5 ft. The lode in the 12, east of Watson's shaft, is yielding saving work for tin.

WHEAL TREMAYNE.—R. Williams, July 13: At the boundary engine-shaft, in the 133 east, on Allen's branch, the branch is 3 in. wide, chiefly composed of mastic, mixed with a little wolfram, and occasional spots of tin, altogether a strong kindly branch, and looks likely to improve shortly as we advance. In the 123, east of Allen's shaft, on Allen's branch, the branch is improving, but still disordered with floors of spar, and worth for tin 6d. per fm. The stopes in back of the same level, west of shaft, is yielding a little low price tin-stuff. In the 113, east of the same shaft, on Allen's branch, the branch is worth 6d. per fm. The stopes in bottom of the same level are worth on an average 15f. per fm. The stopes in back of the same level are worth on an average 12f. per fm. In the cross-cuts north and south of the same level there is no change to notice. In the 103, east of the same shaft, on Allen's branch, the branch is worth 4f. per fm. The men opening and stopping ground in the 93, fixing skip-road, &c., are progressing favourably. The masons have commenced building the new engine-house, and there will be on it a full pane next week.

WHEAL UNION.—T. Glanville, July 12: Tutwork Setting: The flat-rod shaft to sink under the 58 by nine men, at 35s. per fm.; lode 2 ft. wide, composed of spar, mastic, and copper ore. The 40 to drive east of the cross-cut, on the middle lode, by four men, at 4f. per fm.; lode worth 10f. per fm. for tin. The 40 cross-cut to drive north from the middle lode by four men, at 15f. per fm. The 40 to drive east, on the south part of the south lode, by four men, at 6f. per fm.; lode worth 6d. per fm. for tin. The 45 cross-cut to drive south of Moyle's shaft by six men, at 10f. per fm. The 23 cross-cut to drive south of the old engine-shaft by four men, at 15f. per fm.

WHEAL UNITY CONSOLS.—W. H. Reynolds, July 13: In the 75 cross-cut north we have met with elvan; the joints of which are strongly tinted green, which I regard as one of the best indications we could have that we are approaching a bunch of ore. The other parts of the mine are much the same as last reported.

WORVAWS DOWNS.—R. Harry, July 16: The masons are getting on well in building the steam-whim and stamp-house, the walls of which will be completed by the end of this week. The deep adit east is driving through a promising lode, 10 inches wide, producing good tin work, opening tribute ground. In the 10, driving north, on the counter, the lode is producing some rich work for tin, worth at present 5f. per fm. No. 1 car-hona, over the 20 west, is worth 20f. per fm. Other points of operation continue much the same as when last reported on.

WHEAL EDWARD.—At the meeting, on Thursday, the accounts showed that the sales of ore for the four months realised 2034f. 16s. 11d., paying the four months' costs, and leaving a balance in favour of the mine of 71f. 10s. 11d. The report stated that the 50, 61, and 71 ends were being driven in good runs of ore, and had the standard not been so depressed, the mine would have been worked at a good profit. The agents had received instructions not to raise more ore than would meet the costs during the continuance of the present price of copper—an example that should be followed by other mines during a period of such great depression.

THE GREAT NORTHERN COPPER MINES IN SOUTH AUSTRALIA.—The official mining reports by the present Australian mail, from the various enterprises in South Australia, are generally of a satisfactory character, and it will be observed that one of them merits special notice—we allude to the Great Northern Copper Company, and we do so in justification of the course we consider it our duty to pursue, when on the constitution of this company its *bonds fiduciariae* was attempted to be impugned. The present and previous reports from the company's mining captains contain indisputable evidence of the successful results which we stated would ensue. The following are the facts:—Active mining operations were commenced on one or two of the company's mines during the latter part of July last, and from one mine alone there has been already raised, carted, and shipped to London, ore to the value of 10,000t.; and at the end of May last a further quantity of ore, of the estimated value of some 12,000t. or 13,000t., was at the company's shipping port, or in course of transit thereto. As to the large profits likely to accrue to the shareholders, we may state that we are advised by our colonial correspondent that in one section of this company's property several thousand tons of ore are in sight, and average from 30 to 35 per cent. The prices realised at the late sale of ore by this company averaged 27f. 4s. per ton. That these facts are worthy of note is shown by the following extract from the last report issued by the Burna Burra Company in April last, and stated that—“The result of the association's operations from Sept. 30, 1859, to March 31, 1860, shows that 7243 tons of ore were raised, and the gross proceeds of the said ore amounted to 26,154f. 11s. 1d., or at the rate of 13f. 6d. per ton, being a considerable improvement upon the two half-years preceding the one under review.”

COAL MINING IN BOHEMIA.—The success which has attended the operations of the Bohemian Coal Company, and the facilities offered for the development of commercial projects with associated capital by the Joint-Stock Companies Acts, have led to the formation of a company upon the limited liability principle, and with a capital of 10,000t., in shares of 12, each, for working the Karbitz Colliery, which is very favourably situated on the Aussig and Teplitz Railway, and subject only to a royalty of 8d. per ton upon the coal raised. The Imperial Mining Commission, upon whose report every reliance can be placed, state that “there runs through this property a seam of brown coal of an average thickness of 42 ft., of excellent quality, undoubtedly the best coal in this basin, perfectly free from sulphur and waste, giving only from 2 to 3 per cent. of fine ash, yielding a brilliant illuminating gas, 47 per cent. of coke, 7 per cent. of tar and ammoniacal water, and yielding in combustion a pure, brilliant, and beautiful flame. This splendid coal seam has been opened, and the coal won by shafts varying in depth from 12 fms. to 20 fms.” The coal can be brought to the pit's bank at 2s. 6d. per ton, and is there readily saleable at 4s. The Imperial mining authorities have permitted reference to be made to them. The concession, which the company acquire for 3000t., comprises six *freischürze*, or in the aggregate some 1,200,000 square fathoms. Mr. W. C. Ramsden, of the Moseley Colliery, North Wales, who has inspected the colliery, recommends three distinct sets of operations being carried on—the sale of coal, of which he estimates from 500 to 600 tons per day could be raised; the lighting, after obtaining permission of the authorities, of Teplitz with gas; and the manufacture of fire-clay found on the estate into pipes to be used instead of cast-iron pipes for the conveyance of gas. The prospectus, detailing more fully the objects and advantages of the company, will be found in another column of this day's Journal.

COMMERCIAL COPPER COMPANY.—We are given to understand that Mr. James Michell has also withdrawn from the direction of this company.

The Maria Johanna has arrived in the London Docks from Port Augusta, with 50 tons of copper ore on board for the Great Northern Copper Company (South Australia). Two vessels from the same quarter, with 180 tons more on board, consigned to the same company, are now overdue.

NEW MAN-ENGINE.—A man-engine has recently been erected at Par Consols Mine, and the agents, Capt. F. Puckey, T. Rich, and J. Hosking, make the following reference thereto in a report presented to the adventurers:—“We are happy to report to you that on Friday last we put our man-engine to work; it is a very excellent machine, doing its duty remarkably well. As practical agents, we consider that the appliance of such an engine is a very humane invention, and the greatest boon to the working miner that can be possibly imagined. Unquestionably it will be the means of prolonging many years the miner's life; the amount of labour will be increased by his being able to work with greater strength, and thereby will the lords of the soil and the adventures be much benefited. You can have no idea how delighted the working miners now are.”

MINE ACCIDENTS.—At Great Wheal Busy one man (Jennings) was killed, and two injured, but recovering, through the breakage of a captain rope. At East Lousia, one man has lost his sight for the present, and a second, it is feared, permanently, by the premature explosion of a hole they were tampering with. At Trevelyan, a kibble fell down the shaft and killed Richard Nettle, aged 35, by knocking him into a winze. At South Tolgus, Jas. Warren, aged 27, was killed by a fall of stone in the workings. At Hallensie, Wm. Jenkins, aged 30, was killed, a 16-in. rope breaking, and knocking him into the shaft with 10 fms. of water.

The Mining Market; Prices of Metals, Ores, &c.

METAL MARKET—LONDON, July 19, 1861.

COPPER.	£ s. d.		BRASS.	Per lb.
Best selected...p. ton	96	0	Sheets	8½d.-9½d.
Tough cake	93	0	Wire	9d.—
Title	93	0	Tubes	10d.-10½d.
Burna Burra (nom.)..	93	0		
Copiapó	85	0	FOREIGN STEEL.	Per Ton.
	0	0	Swedish, in kegs (rolled) 15	10 0
	0	0	" (hammered) 16	0 16 10 0
	0	0	Ditto, in faggots	16 10 0-15 0
	0	0	English, Spring	18 0-23 0 0
	0	0	Bessemer, Engineers Tool	4 0 0
	0	0	Spindle	30 0
	0	0	QUICKSILVER	7 0 p. bottle
	0	0	SPELTER.	Per Ton.
	0	0	Foreign	15 10 0-15 15 0
	0	0	To arrive	16 0 0 (Nom.)
	0	0		
	0	0	KING.	
	0	0	In sheets	22 0 0
	0	0	TIN.	
	0	0	English, blocks	117 0 0
	0	0	Ditto, Bars (in barrels)	118 0 0
	0	0	Ditto, Refined	119 0 0
	0	0	Banca	115 0 0 (Nom.)
	0	0	Straits	111 0 0-111 10 0
	0	0		
	0	0	TIN-PLATES.	
	0	0	IC Charcoal, 1st qua. p. bx. 1	8 0 1 9 0
	0	0	IX Ditto 1st quality	14 0 1 15 0
	0	0	IC Ditto 2d quality	1 4 6 1 6 6
	0	0	IX Ditto 2d quality	1 11 0 1 13 0
	0	0	IC Coke	1 2 0 1 2 6
	0	0	IX Ditto	1 8 0 1 9 0
	0	0	Canada plates	12 10 0-13 0 0
	0	0	In London; 20s. less at the works.	
	0	0	Yellow Metal Sheathing. p. lb. 8½d.-9d.	
	0	0	Indian Charcoal Pigs	6 12 6-6 15 0
	0	0	In London	1s. 6d. per box less.
	0	0		
	0	0	LEAD.	
	0	0	English Pig	19 5 0-21 10 0
	0	0	Ditto sheet	21 0 0-22 0 0
	0	0	Ditto red lead	22 0 0
	0	0	Ditto white	28 10 0-30 0 0
	0	0	Ditto patent shot	23 0 0-24 0 0
	0	0	Spanish	19 0 0
	0	0		
	0	0	At the works, Is. to 1s. 6d. per box less.	

REMARKS.—There is but little actual improvement to note in metals; some slight movement is visible, though not sufficient to cause buyers to come in largely at present. There are many watching the market very closely, in order to take advantage of the first indication of any advance, as it is thought most probable that when a reaction does take place the rise in the value of metals will be very rapid, but as yet we know of nothing calculated to increase the demand to any great extent; in fact, judging from the state of foreign markets, and the heaviness of stocks, rather the reverse must be anticipated.

COPPER.—The demand for English cake, tile, and manufactured is of a very limited character. The market was a shade firmer early in the week, but buyers were not to be tempted, and contracts can still be made under fixed rates with facility. In foreign a little more enquiry exists for Chili, but only sufficient to justify a trifling advance. Other descriptions not above former quotations—Burra Burra, 93d.; Copiapó, 86d. to 88d. Yellow metal slow of sale, and unaltered in price.

IRON.—A steadier demand exists for rails, price firm at 5d. Merchant bars continue in fair request, at 5d. 17s. 6d. f.o.b. in London, 5d. 5s. in Wales. Staffordshire descriptions very little enquired for, sellers submitting to any reasonable terms in order to do business. Owing to heavy arrivals, and the slackness of the demand, Swedish bars have considerably receded in price; several parcels have been offering, ex ship, at 10d., and not finding purchasers even at this low figure, have been landed. Some lots, however, were sold at this price for arrival. Scotch pigs showed a tendency to advance since the beginning of the week; mixed numbers are quoted 50s. 6d. to 50s. 9d., and market firm. Shipping brands in fair demand.

LEAD.—A rather better tone is observable in the market, in consequence of some little enquiry having sprung up for English pigs. Prices remain unaltered—19s. 6s. to 19s. 10s. Sheet and shot in very limited request. Spanish pigs, 19s. sellers.

SPELTER.—The market is without improvement; this inactivity, if it continues to exist, must have the effect of further reducing prices, but up to day quotations have declined only about 5s. per ton—15s. 10s. Arrivals continue to take place, and the sales are comparatively small, so that from this source a further depreciation in value may be expected. Prices, too, on the other side are lower, and stocks very heavy; thus it will be seen that the prospects of the spelter market are anything but cheering. Zinc, 2l. 2s.—dull of sale.

TIN.—English makes are to be bought freely under fixed prices; the demand is very small. Foreign shows great inanimation, and buyers exceedingly difficult to meet with. Straits sold at 111s. Banca, 114s. to 115s. nominal.

TIN-PLATES.—Stocks continue to accumulate, in consequence of the difficulty of finding purchasers. Makers complain that the price barely pays cost of production.

GLAS

Tees Wallsend, 19s.; Hartlepool Wallsend, 18s. 9d.; Kellog Wallsend, 18s. 3d.: 125 ships at sea.

At the Par Consols Mine meeting, on Saturday, the accounts for the four months ending April showed a profit of 1736s. 7s. 1d., which, added to the balance at last account, made a total credit of 6036s. 12s. 5d. A dividend of 1600s. (5s. per share) was declared, and a balance of 4436s. 12s. 5d. carried to the credit of the next account. It was resolved that as the man-engine, which has been recently erected in this mine at an expense exceeding 1000s., will be as much, if not more, for the benefit of the lord of the soil as for the adventurers, in consequence of the miners being enabled to increase their labour from 20 to 25 per cent., the purser is instructed to put himself in communication with the lords, in the full hope and expectation that they will authorise them to deduct 2½ per cent. from this time from their respective dues, in order to cover the interest upon the above permanent outlay, and the necessary expenses in keeping it in an efficient state, the same as has been done by the lords at Fowey Consols Mine.

At Frank Mills Mine meeting, on July 12, the accounts for March and April showed—Balance last audit, 1041s. 1s. 2d.; arrears of call paid, 11s. 10s.; ore sold, 2324s. 13s. 3d.—3367s. 1s. 10d.—Mine cost, merchants' bills, 2891s. 9s. 10d.—1329s. 10s. 6d. carried to credit of next account. Capt. P. T. Nichols and John Corrogh reported that their next sampling would be about the same quantity as last. The mine and all the machinery connected therewith was in very fair condition. They had 145 hands employed underground and at surface. They are expecting to cut a lead, never before seen in the district, in the cross-cut now driving at the 60 fm. level.

At Alfred Consols meeting, on July 15, the accounts for two months ending April showed—Balance last audit, 218s. 14s. 5d.; mine costs, 1426s. 12s. 4d.; merchants' bills, 816s. 17s. 4d.—Copper ore sold, 1563s. 14s. 6d.; leaving debit balance, 5897s. 9s. 4d. Captain Uren and Hosking reported that as the future success of the mine depends very materially upon the vigorous prosecution of Davy's engine-shaft, which is now completed to the 160 fm. level, and the balance bob-plat finished to the 60 fm. level, they recommend that the pitwork be at once completed to the bottom of the above shaft, thereby dispensing with Field's engine entirely, which would effect a saving of 50s. per month, and enable them to prosecute the bottom of the mine without let or hindrance. The whole could be done for 1100s. or 1200s., and the materials in connection with Field's engine would more than cover the expense.

At Exmouth Mine meeting, on July 12 (Mr. W. Sanders in the chair), the accounts showed—Balance last meeting, 1261s. 16s. 3d.; mine cost, merchants' bills, and sundries, 1867s. 16s. 10d.—3129s. 13s. 1d.—Calls received, 922s. 2s. 7d.; ore sold, 599s. 10s. 6d.; interest, 27. 11s.; leaving debit balance, 1205s. 9s. 4d. A call of 3s. 6d. per share was made. Messrs. Porter, Smith, Glover, Boden, Sanders, Waters, and Dr. Ramsbotham were appointed committee of management for the next two months. Captain J. P. and J. Nicholas reported that taking into consideration the improved prospects in the two extreme ends—the south and the north—they think vigorous development will lead to good results. All the machinery is in good working order. They have 122 hands employed.

At the Wheal Concord Silver-Lead and Copper Mining Company first annual general meeting, Mr. W. Heall (the Chairman) reported that the prospects of the company were, in the opinion of the directors, most encouraging. They had made arrangements with Mr. Bastier for the purchase of his patent pump; the mine had been partially forked, and as soon as additional strength shall have been supplied to the chain it is expected, from the enormous pumping powers of the machine, that it will be speedily forked to the bottom. Specimens were produced at the meeting of lead ore of extraordinary richness, taken from the 10 fm. level east, and the captain at the mine stated that the ore brought to the surface was of the best quality. Altogether, the directors congratulated the company upon the prospects of the mine, and felt confident that only a very short period will elapse before the mine takes a prominent position among the dividend-paying mines.

At Wheal Polmear meeting, on July 10 (Mr. E. Carlyon in the chair), the accounts for the four months ending April showed—Mine cost, Jan., 508s. 11s. 1d.; Feb., 387s. 15s. 11d.; March, 403s. 18s. 9d.; April, 406s. 6s. 4d.; merchants' bills, and sundries, 715s. 5s. 5d.; water-wheel and crusher, 150s.; dues, 119s. 11s. 10d.—2691s. 9s. 4d.—Balance last audit, 10s. 10d.; copper ore sold, January, 89s. 10s. 9d.; May, 1343s. 17s. 1d.; carriage, 67s. 11s. 6d.; leaving debit balance, 282s. 19s. 2d. The report of Capts. J. Dally and W. Rowe stated that they would have 120 tons of copper ore for sale on Thursday.

At the Wheal Lushington meeting, on July 9, the accounts for April and May showed—Balance last audit, 125s. 17s. 4d.; mine cost, April, 96s. 6s. 4d.; May, 16s. 1s.; merchants' bills, 17s. 8d.; dues, 24s. 14s. 6d.—427s. 2s. 2d.—Call, 122s. 10s.; tin sold and carriage, May, 93s. 2s. 6d.; use of burning-house, 11s. 5s. 6d.; tin sold and carriage, June, 208s. 2s. 1d.; leaving debit balance, 27. 7s. 1d. The purser was instructed to take legal proceedings against all debtors who may neglect to pay their debts within a reasonable time. It was resolved that Capt. A. Langdon confine his attention to the dressing of tin, for which he should receive four guineas per month, and that Capt. Briny's salary, for extra services to be in future rendered by him, and for assaying the samples, be four guineas per month.

At the Leeds and St. Aubyn Mine meeting, on July 10, the accounts for the four months ending April showed—Mine cost, Jan. to April, 687s. 18s. 3d.; merchants' bills, 206s. 13s. 9d.; dues, 22s. 15s. 1d.—917s. 7s. 1d.—Balance last audit, 14s. 1d.; black tin sold, 820s. 14s.; leaving debit balance, 95s. 19s. 10d. The purser was empowered to let from time to time such numbers of the unemployed stamp-hands as may not be required for the use of the mine, the monthly rent of which was to be fixed by Capt. J. Curtis and Capt. R. S. Bryant. The report of the managing underground agent (Capt. John Curtis) stated that in about three months they calculated on reaching the 10, and then with the two additional ends driving, and cutting out pitches, they might confidently reckon on increasing three-fold their present sales of tin.

At the North Roskear Mine meeting, on July 9, the accounts showed—Balance last audit, 49s. 15s. 4d.; mine cost, April, 106s. 12s. 1d.; surgeon's pence, 11s. 16s. 10d.; water rent, 29s. 11s. 3d.—Calls received, 10s. 10d.; tin sold, 22s. 12s. 1d.; dues, 12s. 15s. 10d.; merchants' bills, 807s. 3s. 11d.—3736s. 2s. 2d.—Copper sold, May, 1644s. 19s. 10d.; tin, 917s. 13s. 8d.; arsenic, 50s.; materials, 31s. 12s.; crushing ore, 18s. 9d.; leaving debit balance, 1118s. 17s. 1d. The purser's representative having read the resolution made May 14, relative to Mr. W. Lanigan's successor, the clerk and storekeeper's duties were defined, and it was resolved that he be required to be on the mine at 6 o'clock A.M. every Monday, seven o'clock A.M. on every other day, and to remain until five o'clock every day, Sundays excepted. It was then proposed that Mr. E. E. Edwards be appointed to the situation of clerk and storekeeper, to which Mr. A. E. Paull was also nominated. It having been urged that whoever occupied the position should attend agreeably with the above resolution, Mr. Paull withdrew, when it was agreed that Mr. Edwards be appointed, at a salary of seven guineas per month. The report of Capts. Joseph Vivian, James Dunkin, and Robert Angove was read, which stated that there were two points to reach, which, if they turned out according to their expectations, would place the mine in altogether a different position from that which it is at present occupied. They looked forward with confidence to making discoveries in these parts of the mine.

At the Wheal Edward meeting, on Thursday (Dr. J. E. Mathew in the chair), the accounts showed a credit balance of 71s. 10s. 1d. The committee were re-elected. Details in another column.

At Wheal Sithney and Carnmeal United Mines meeting, on July 9, the accounts showed—Balance last audit, 1591s. 13s. 9d.; mine cost, 1040s. 14s. 1d.; merchants' bills, 456s. 7s. 7d.; balance for engine, 224s. 3s. 11d.—Calls received, 204s.; black tin sold, 305s. 4s. 2d.; horse sold, 14s.; leaving debit balance, 945s. 7s. 1d. A call of 10s. per share was made. Capts. M. W. Martyn, W. Chappell, and W. H. Marin reported upon the various points of operation. The labour cost is charged to May 17, the merchants' bills to June 1.

At West Wheal Margaret meeting, on Thursday (Mr. R. Hallett in the chair), the accounts showed—Balance last audit, 281s. 3s. 1d.; tin sold, 98s. 4s. 6d.; advances, 119s. 5s.; calls received, 446s. 14s. 8d.—Stock, 62s. 7s. 3d.—Mine cost, March, April, and May, 406s. 17s. 7d.; merchants' bills, 153s. 12s.; acceptances, 191s. 2s. 4d.; commissions, 161s. 16s.; bankers' commission, 22. 10s. 6d.; leaving balance (cash), 17. 10s. 1d. The balance of liabilities over assets was 798s. 2s. 1d. The report of the agent (Capt. White) stated that the men have begun to sink Hallett's shaft below the 30 fm. level. "We have now set them a bargain to sink it to the 40 fm. level, which will be completed about the beginning of October, if the ground continues as it is at present. Our setting on Saturday last was as follows:—Hallett's shaft, to sink by 14s. men, 10 fathoms, as per contract, 12s. per fathom, and two tribute pitches at 13s. 4d. in 17." The Chairman stated that the agent estimated the loss per month at about 80s.; until a discovery was made, therefore, to discharge the liabilities and provide the funds necessary for the working of the mine during the current three months it would be necessary to make a call of 8s. per share. The report and accounts having been adopted, a call of 8s. per share was made. Some discussion ensued as to what course should be adopted with regard to the future, when it was agreed that the matter should be left in the hands of the committee. A vote of thanks to the Chairman terminated the proceedings.

At Trumpet United Mines meeting, on Tuesday (Mr. John Sugars in the chair), the accounts for the three months ending May showed—Mine cost, merchants' bills, and sundries (including 130s. for boiler), 599s.—Balance last audit, 447s. 15s. 6d.; calls received, 432s. 8s.; leaving debit balance, 115s. 16s. 6d. A call of 3s. 6d.; discount and interest, 361s. 1d.; lord's dues, 146s. 5s. 5d.; sundries, 44s. 8s.; discount and interest, 361s. 9s. 2d.—3586s. 2s. 11d.—Lead ore sold, 247s. 2s. 2d.; leaving debit balance, 110s. 9s. 4d. From a statement submitted, it appeared that the returns from July, 1860, to the end of June, 1861, showed an increase of 6s. tons of lead ore (amounting in value to about 650s.) as compared with the corresponding preceding period. It was stated that since May, 1860, a new plan of operations had been carried on, and extra tutwork had been commenced in opening out the various levels, the additional cost of which had been met by the returns. At the present moment the mine contains a fair quantity of lead in reserve, whereas previously to the adoption of the new plan of operations there were no reserves, the ore having been taken away close up to the ends; therefore, there can be no doubt the mine has greatly improved since May, 1860. But for the falling off in the price of lead, the returns at the present time would be leaving a profit. From the appearance of the ends, however, it was calculated that a still greater improvement would soon take place, and, from the improved condition of the company's affairs and the success which has attended the new plan of operations, that regular and steady profits would be made. As the loss per month, including the cost of the increased tutwork operations, has not exceeded 40s., it must be obvious that a small improvement in any one part of the mine would make their operations profitable, and the general appearance of the ends justified the assumption that the returns would henceforth more than cover the monthly loss which had been sustained during the past year; and, moreover, that the mine, after years of perseverance, would become a paying property. From the agent's report, it appears that the present average of the various stope and ends was about 115 cwt.s. per fm., and from the appearance of the ends he calculated that average would be considerably increased. He stated that the stope were yielding well, and would continue to do so for some time; and although at the present time the ends were not highly productive, the indications and the strength of the lode were such as to scarcely leave a doubt of largely increased returns. There were six levels being driven—the old Brandley, which is being driven from the mountain side, in order to reach the deposits worked on by the ancients, and whence, from the appearance of the excavations, a considerable quantity of lead was raised; as they continued their operations the indications grew stronger as they were nearing those deposits—in fact, the lode was now giving stones and spots of lead. The adit level was being driven, which increased in depth from the surface the

further it was explored, owing to the accessibility of the mountain. The 20 fm. level was being driven north, with the lode presenting good appearances. In the 30 fm. level the lode was divided, but each part looked strong and kindly. In the 40 the lode was yielding some lead, and presenting prospects of improvement; and in the 50 the prospects were still more encouraging. After a short discussion the report was received and adopted, and the accounts were passed and allowed. A call of 4s. per share was made. A vote of thanks to the Chairman was passed, when the proceedings terminated.

At the West Damsel Mine meeting, on Monday, the accounts showed—Mine cost, May, 640s. 2s. 2d.; June, 239s. 7s.; merchants' bills, 2891s. 9s. 10d.—1329s. 10s. 6d. carried to credit of next account. Capt. P. T. Nichols and John Corrogh reported that their next sampling would be about the same quantity as last. The mine and all the machinery connected therewith was in very fair condition. They had 145 hands employed underground and at surface. They are expecting to cut a lead, never before seen in the district, in the cross-cut now driving at the 60 fm. level.

At the United Mines meeting, on Wednesday, it was proposed to combine the mines with Wheal Clifford and Consols, the combined adventure to be in 2900 shares of 35s. each. As the present market value of Clifford and Consols is 1751s., and that of the United Mines 35s. each, Clifford and Consols share will represent 5s. shares in the new adventure, and each United Mines share one share therein. Shares relinquished by Clifford and Consols are to be paid for in two years at the above valuation. The materials on the United Mines are valued at 14,000s. The proposition will be decided by the result of meetings of Clifford and Consols on August 6, and of the United Mines on August 7.

At the South Wheal Gorland meeting, on Thursday (Mr. J. Hoyle in the chair), the accounts to the end of June showed—Balance last audit, 473s. 10s.; mine cost from August, 1860, to June, 1861, 409s. 4s. 7d.; leaving balance in favour of mine, 64s. 5s. 5d. It was agreed that the consideration of the creation and issue of United Mines to be deferred to the next general meeting. A call of 10s. per share would have shown a small profit on the two months' working.

At the United Mines meeting, on Friday, the accounts for the two months ending April showed—Balance last audit, 218s. 14s. 5d.; mine costs, 1426s. 12s. 4d.; merchants' bills, 816s. 17s. 4d.—Copper ore sold, 1563s. 14s. 6d.; leaving debit balance, 5897s. 9s. 4d. Captain Uren and Hosking reported that as the future success of the mine depends very materially upon the vigorous prosecution of Davy's engine-shaft, which is now completed to the 160 fm. level, and the balance bob-plat finished to the 60 fm. level, they recommend that the pitwork be at once completed to the bottom of the above shaft, thereby dispensing with Field's engine entirely, which would effect a saving of 50s. per month, and enable them to prosecute the bottom of the mine without let or hindrance. The whole could be done for 1100s. or 1200s., and the materials in connection with Field's engine would more than cover the expense.

At Exmouth Mine meeting, on July 12 (Mr. W. Sanders in the chair), the accounts showed—Balance last meeting, 1261s. 16s. 3d.; mine cost, merchants' bills, and sundries, 1867s. 16s. 10d.—3129s. 13s. 1d.—Calls received, 922s. 2s. 7d.; ore sold, 599s. 10s. 6d.; interest, 27. 11s.; leaving debit balance, 1205s. 9s. 4d. A call of 10s. per share was made. Captain J. P. and J. Nicholas reported that taking into consideration the improved prospects in the two extreme ends—the south and the north—they think vigorous development will lead to good results. All the machinery is in good working order. They have 122 hands employed.

At the Wheal Moor Mine meeting, on July 4, the accounts for March and April showed—Balance last audit, 5071s. 12s. 1d.; mine cost and merchants' bills, March, 253s. 16s. 2d.; April, 278s. 16s. 5d.—Calls received, 400s.; black tin sold, 56s. 10s. 6d.; leaving debit balance, 5551s. 11s. 4d. The balance of liabilities over assets was 622s. 5s. 7d. A call of 10s. per share was made. Captain Nicholas Pascoe reported favourably upon the position and prospects of the mine, and a shareholder who has since visited the mine describes the lodes as still holding good.

At the Port Phillip and Colonial Mining Company meeting, on July 31, a financial statement will be presented showing—Cash at bankers, 2213s. 17s. 1d.; bills in hand, 4000s.; on deposit at London Joint Stock Bank, 5500s.; 11,713s. 17s. 1d.—Dividends unclaimed, 568s. 15s.; Melbourne stores, 500s.; leaving available on the six months' working to the end of March was 10,050s. 7s. 5d. It will be proposed to distribute to the shareholders 1s. per share, free of income tax, and to appropriate 10 per cent. thereof to the reserve fund. The company's dead not providing for the declaration of dividends, except in January, the proposed distribution will be made as a "distribution on account of profits," and at the next annual meeting measures will be proposed to remedy the omission. Under date Melbourne, April 25, Mr. Bland writes:—"The returns for March complete another half-year, and the result is, I consider, highly satisfactory. The quantity of quartz crushed during that period amounts to 14,758 tons, yielding 11,521 ozs. 9 dwis. 8 grs. of bar gold, or an average of 15 dwts. 16 grs. per ton. The weekly average of quartz stamped is 567 tons, and the average duty per head per diem is 2 tons 7 dwts. 1 qr. The amount received on Clunes account for the six months is 20,125s. 10s. 8d.; expended 10,067s. 9s. 3d.; profit for six months, 10,058s. 7s. 5d. The whole of the machinery is in excellent order, and the supply of mineral ample."

At the Penhal Moor Mine meeting, on July 4, the accounts for March and April showed—Balance last audit, 5071s. 12s. 1d.; mine cost and merchants' bills, March, 253s. 16s. 2d.; April, 278s. 16s. 5d.—Calls received, 400s.; black tin sold, 56s. 10s. 6d.; leaving debit balance, 5551s. 11s. 4d. The balance of liabilities over assets was 622s. 5s. 7d. A call of 10s. per share was made. Captain Nicholas Pascoe reported favourably upon the position and prospects of the mine, and a shareholder who has since visited the mine describes the lodes as still holding good.

At the East Wheal Margaret meeting, on Tuesday (Mr. T. S. Bolitho in the chair), the mine and materials were offered by auction in one lot, but the highest bid being 1500s., and the reserved price 1800s., they were bought in. It was then resolved that the committee be authorised to dispose of the property at any sum they may think right to accept beyond 1800s., and if no sale can be effected before August 1, the agents are to prepare the materials for sale. The lord's agents are to be offered the materials on the terms of the lease, and the payment of all arrears of calls are to be forthwith enforced.

At the South Wheal Gorland meeting, on Thursday (Mr. J. Hoyle in the chair), the accounts to the end of June showed—Balance last audit, 473s. 10s.; mine cost from August, 1860, to June, 1861, 409s. 4s. 7d.; leaving balance, 64s. 5s. 5d. It was agreed that the consideration of the creation and issue of United Mines to be deferred to the next general meeting. A call of 10s. per share was made. Captain J. P. and J. Nicholas reported that taking into consideration the improved prospects in the two extreme ends—the south and the north—they think vigorous development will lead to good results. All the machinery is in good working order. They have 122 hands employed.

At the Clunes Quartz Mining Company meeting, on July 4, the accounts for the six months ending that day showed—Balance last audit, 125s. 17s. 4d.; mine cost, April, 96s. 6s. 4d.; raw quartz account, 810s. 7s. 6d.; sandries, 611s. 9s. 4d.—26,261s. 5s. 3d.—Loan from bank (outstanding at Nov. meeting) repaid, 95s. 11s. 7d.; labour cost, wages, &c., 19,335s. 5s. 4d.; bankers' commissions, 31s. 16s. 8d.; leaving credit balance, 6796s. 2s. 4d. Dividends amounting to 534s. were declared, and 14,050s. 2s. 4d. carried to credit of next account. The balance of assets over liabilities was 9144s. 6s. The average yield of gold per ton of quartz was 16 dwts. 20½ grains. These accounts are particularly interesting, as relating to the falacious notion of the reefs getting poorer or cutting out in depth. The half-year concluded was the most successful since the mines started.

At the United Mexican Mining Association meeting, on Thursday, the directors decided to pay off 40 per cent. of the preference stock out of the funds in hand.

At the Central Italian Copper Company annual meeting, on Monday

KARBITZ COLLIERY COMPANY (LIMITED), BOHEMIA.
In 10,000 shares of £1 each.
2s. 6d. to be paid on application, 2s. 6d. on allotment, and the residue at intervals of not less than three months, and in amounts not exceeding 8s. per share.
Subject to a royalty of 8d. per ton.

DIRECTORS.

H. W. ABBOTT, Esq., York-buildings, London.

J. TULLY, Esq., Charter House-square, London.

G. BENNETT, Esq., Hammersmith.

Lieut.-Col. J. R. ABBOTT, Upper Spring-street, Portman-square, London.

BANKERS.—The Bank of London, Threadneedle-street.

SOLICITOR.—J. Elliott Square.

OFFICES OF THE COMPANY.—146, GRESHAM HOUSE, LONDON, E.C.

This property is situated in the Karbitz coal basin, on the line of the Aussig and Teplitz Railway. On lands held under Grubenmassen, or free grants of mineral in perpetuity and Freischurze, or grants conferring a right to claim Grubenmassen, or free grants as required, extending over about 1,000,000 square fms. This coal field contains above 55,000,000 tons of coal; from which deduct for faults, pillars, and waste 20 per cent, which is a very high estimate.

The following is an extract from the report made by the Imperial Mining Commission, on the 10th June, 1861, the original of which may be seen at the office of the company:

"There runs through this property a seam of brown (Canal) coal of an average thickness of 42 in., of excellent quality, undoubtedly the best coal in this basin, perfectly free from sulphur and waste, giving only 2 to 3 per cent. of ash, yielding a brilliant, illuminating gas, 47 per cent. of coke, and 7 per cent. of tar and ammoniacal water, and yielding in combustion a pure brilliant and beautiful flame. This splendid coal seam has been opened, and the coal won by shafts varying in depth from 12 to 20 fms."

The demand is unlimited. The total costs of machinery, labour, and incidental expenses, to raise from 500 to 600 tons of coal a day, cannot exceed £2500, at which price a responsible contractor has undertaken to execute the work."

The cost of obtaining the coal, including all charges, is under 2s. 6d. at bank; the average selling price also at bank is 8s.; leaving a clear profit of 2s. 6d. per ton; and a responsible firm in Hamburg has offered to take 2000 tons a week, at £1 per ton.

The Teplitz and Aussig Railway Company have entered into arrangements to make a siding to the works, whereby the coal can be conveyed to the port of shipment in 27 minutes.

The report of Mr. Ramsden, and Mr. Wm. Reefe, the well-known colliery viewers; and of eminent English colliery agents, and some of the best Austrian geologists, confirmatory of the above, can be seen at the office of the company.

The Imperial mining authorities have permitted reference to be made to them.

The directors have entered into a contract for the purchase of this valuable property (subject to the royalty of 8d. per ton), for £3000—£1000 in cash, and £2000 in paid-up shares. Operations are commenced, and the capital as subscribed will be applied to the further prosecution of the works and the completion of the purchase.

KARBITZ COLLIERY COMPANY (LIMITED).
NO APPLICATION FOR SHARES will be RECEIVED after SATURDAY NEXT, the 27th inst. By order, J. ELLIOTT SQUARE.

146, Gresham House, July 19, 1861.

THE NORTH PAR COPPER AND TIN MINING COMPANY (LIMITED).

In 15,000 shares of £1 each. Deposit, 5s. per share on application.

The remainder, if required, in calls of 5s. per share, and at intervals of not less than three months, of which due notice will be given.

DIRECTORS.

JOSH. HOPGOOD, Esq., 77, Addison-road, Kensington.

HARRY L. LEE, Esq., Regent's Park-terrace, London, and Athos Villa, Plymouth.

MONTAGUE R. LEVERSON, Esq., 12, St. Helen's-place, London.

JOHN PALMER, Esq., 13, Brunswick-terrace, Stoke, Devonport.

JOHN WILLIAMS, Esq. (Nicholls, Williams, and Co.), Tavistock.

BANKERS.—London and County Bank, 21, Lombard-street, London, and Stock Exchange.

SOLICITORS.—Messrs. Wickens and Bruton, 4, Tokenhouse-yard, London.

AUDITORS.—Messrs. Hart Brothers, Moorgate-street, London.

MANAGING AGENT.—Capt. James Richards, Devon Great Consols, Tavistock.

PURSER.—Mr. E. S. Codd, George-street Chambers, Plymouth.

SECRETARY.—Mr. W. S. Trotter.

OFFICES.—No. 1, GREAT WINCHESTER STREET, LONDON.

This company is formed for the purpose of working an extensive and valuable seat, in the parish of St. Blazey, Cornwall, the property of William Meadland, Esq., of that place. The dues are 1-18th.

This property, both from its appearance and position, holds out great prospects of success. It is situated in a rich and well-known district. It comprises within its limits some of the south lodes of Fowey Consols, and it is also parallel to Par Consols and West Fowey, all of which are dividend-paying mines.

As a large proportion of the shares have already been taken up, all applications must be made on or before Saturday, the 27th inst.

Prospectuses, with plans and other information, can be obtained from the brokers; from Mr. E. S. Codd, purser, George-street Chambers, Plymouth; and from the secretary, at the offices of the company.

EAST FOWEY CONSOLS MINE (LIMITED).

Capital £10,000, in 4000 shares of £2 10s. each.

Amount paid, £1 5s., the balance to be called as instalments.

3000 of the above shares are held by an influential proprietor, leaving 1000 to be disposed of at a discount of 10 per cent., application for which will be made to Messrs. FULLER and Co., stock and sharebrokers, 26, Change-alley, Cornhill, London.

PROSPECTUS.

The lodes of this valuable property are a continuation of the celebrated Fowey Consols adjoining, which mine has yielded above £550,000 profit, and proved to increase in value as the works extend east towards East Fowey Consols boundary.

An engine-shaft is sunk to the 30, and levels extended toward the lodes, which, by connecting a few fathoms, will intersect the main lode. It must not be overlooked that this mine is being wrought in virgin ground, and, as a fact most significant of the value of this property, that recently in one of the deepest levels in Fowey Consols, at a depth of 220 fms. from surface, the lode is reported to be worth 200/- per fm.

Eight lodes are proved to exist in East Fowey Consols, presenting indications of great mineral wealth. Analogies are strongly in favour of a highly successful result emanating from a vigorous prosecution of the works, and of the property becoming equally as rich as the mine by which it is surrounded—viz., Par Consols, Crinnis, Pembroke, and other dividend mines.

THE BRYNFEILIN COPPER MINING COMPANY (LIMITED).

Capital £6000, in 1200 shares of £5 each.

Incorporated under the Joint-Stock Companies Act, with limited liability.

Deposit, £1 per share.

TRUSTEES.

MR. WILLIAM HAWES, Piccadilly, Manchester.

MR. EDGAR WILLIAMS YARROW, 27, Arundel-square, London.

DIRECTORS.

MR. WILLIAM HAWES, Piccadilly, Manchester.

MR. HORATIO NELSON, 10, New Cavendish-street, Portland-place, London.

MR. EDGAR WILLIAMS YARROW, 27, Arundel-square, London.

BANKERS.—Messrs. Roberts, Lubbock, and Co., London.

SOLICITORS.—Messrs. N. Lindo and Son, 47A, Moorgate-street, London.

MANAGER.—Mr. John Evans, Plasina, Penmorfa, North Wales.

SECRETARY.—Mr. Thomas Fuller, 8, Moorgate-street, London.

PROSPECTUS.

This company has been formed to purchase the lease of, and to continue upon a more extensive scale the workings of, the Brynfeilin Copper Mine, situate in the parish of Beddgelert, North Wales.

The operations have been previously carried on by a few private gentlemen, who being willing, in order to extend the operations, to admit a limited number of co-adventurers with a capital of £3000—a sum considered ample to place the mine in a dividend position,—have consented to transfer the whole of their interest to the present company for the sum of £3000, and to accept 600 shares of £5 each, paid-up, in liquidation thereof.

The principal workings have been confined to three veins lying a few feet apart, from which 515 tons of copper ore have been raised, averaging a produce of 8½ per cent., and realised the sum of £3763 14s. 10d.

The ground in which the lodes are embedded is highly mineralised, and of the most promising description for the production of rich copper ore, the main lode having yielded 7 tons, worth £50 per fm. The ore is richer in quality and of more value going down than in the upper workings, where about 240 fms. of ground have been wrought, each fathom having yielded £12 worth of copper ore, at an average cost of £4.

By reference to the plan of the workings, it will be seen that the courses of ore opened in the upper levels concentrate in the adit level, where a junction of the lodes take place, justifying the expectation that upon this point being reached (about 25 fms. from the present end), large and continuous courses of ore will be found.

The property is most advantageously situated, being on the north bank of the River Glyndyfrdwy, affording every facility for the economical working of the mine, there being an abundant supply of water-power.

Reports from competent mining engineers and agents, as to the general capabilities of the mine, and the certainty of realising profitable results from a judicious mode of working, made be seen at the office of the company, affording ample proof as to the value and importance of the property, the prospects of which present unusual chances of great success, and a large return for the capital invested.

In the event of the mine paying dividends before the full amount of capital is called up, such dividend to be in proportion to the amount paid; but any shareholder may, within three months of subscribing for shares, pay in advance the full amount, and be allowed a discount of 2d. per cent.

Application for the remaining 6000 shares to be made, accompanied with the deposit of £1 each, to the Secretary, at the registered office of the company, where every information may be obtained.

TO ADVENTURERS IN FOREIGN MINES.—MR. HARRY THOMAS VERRAN, OF PLACENTIA, NEWFOUNDLAND, who has had considerable experience (under the tuition of his father, and in connection with many other experienced Mining Engineers) is ready to UNDERTAKE the EXAMINATION and REPORTING upon MINERAL PROPERTIES in Newfoundland, the United States, or any other country, where his services may prove useful to capitalists. The greatest confidence may be placed in Mr. VERRAN, who will use his best judgment in giving reliable information to those who may repose confidence in him.

LEICESTER AND CO. (late Leicester, Brache, and Teague),

CONSULTING MINING ENGINEERS AND SURVEYORS, AND GENERAL

MINING AGENTS, MELBOURNE, VICTORIA, PROCUCE MINING LEASES ON

ELIGIBLE TERMS from the GOVERNMENT of VICTORIA and NEW SOUTH

WALES, on receipt of a remittance for £200, to cover costs of lease, survey and report, &c. Messrs. LEICESTER and CO. OFFER to TAKE the MANAGEMENT of MINING COMPANIES, and PROVIDE OFFICE ACCOMMODATION, for a percentage on the profits of the company.

For further particulars, apply to Mr. RICHARD MIDDLETON, Mining Journal office

26, Fleet-street, London, E.C.

All remittances must be made through our bankers, the Union Bank of Australia.

THE PROGRESS OF MINING IN 1860,

BEING THE SEVENTEEN ANNUAL REVIEW.

BY J. Y. WATSON, F.G.S., Author of the *Compendium of British Mining* (published in 1843), *Gleanings among Mines and Miners*, &c.

The SIXTEEN ANNUAL REVIEW OF MINING PROGRESS appeared in the MINING JOURNAL of December 31, 1859, and January 7, 1860.

A FEW COPIES of the REVIEW OF 1855, containing Statistics of the Metal Trade, the Dividends and Percentage Paid by British and Foreign Mining Companies, and the State and Prospects of upwards of 200 Mines. Also a FEW COPIES of the REVIEW OF 1852, 1853, and 1854, MAY BE HAD on application to Messrs. WATSON and CUELL's Mining offices, 1, St. Michael's-alley, Cornhill, London.

Also, STATISTICS OF THE MINING INTEREST. By W. H. CUELL.

Now ready, price 1s.

THE MINING JOURNAL.

truth, as honourable a board of directors as any existing, not excepting the world-beaten imbecile "London board."—A MINING SPECULATOR.—Dublin.

SUBSCRIBERS IN AMERICA.—Our friends in America are informed that they can obtain the *Mining Journal* by ordering it from a bookseller in any of the principal towns of the United States. Mr. Tribbner, of Paternoster-row, is the London agent, and sends parcels by every mail to the principal booksellers and news agents there.

* * SALES OF LEAD AND TIN.—We are preparing the usual Quarterly Returns for publication in next week's Journal. We shall be glad to receive particulars, from pursers and others interested, that they may appear correctly. The Returns are intended to comprise the sales of ores from all the mines producing tin and lead.

THE MINING JOURNAL

Railway and Commercial Gazette.

LONDON, JULY 20, 1861.

The NORTH OF ENGLAND INSTITUTE OF MINING ENGINEERS have now concluded their first migratory meeting—that at Birmingham—the details of which we publish in another column of this day's Journal, and the success achieved has been complete. More than eight years have now elapsed since the establishment of the Institute, and during that period some of the most valuable papers have been read before its members, and a large amount of knowledge, acquired from practical experience, has been placed within the reach of all. The active promoters of the project were Messrs. NICHOLAS WOOD, D. JONASSOHN, T. E. FORSTER, and GEORGE ELLIOTT, the first of whom was subsequently appointed President of the Institution, the office of which he has since very ably filled. At the first ordinary meeting of the Institute, Mr. WOOD set forth in the most lucid manner the aims of the Association, and pointed out the course which should be pursued to render the Institute useful to those in whose midst it had been established, and for whose benefit it had been organised. "The object of the Institute," he remarked, "is twofold; first, by a union or concentration of professional experience, to endeavour, if possible, to devise measures which may avert or alleviate those dreadful calamities which have so frequently produced destruction to life and property, and which are always attended with so much misery and distress to the mining population of the district; and, secondly, to establish a literary institution more particularly applicable to the theory, art, and practice of mining than the institutions in the locality present, or which are within the reach of the profession in this locality." From the time Mr. WOOD laid down this plan of action he has strenuously endeavoured, both by precept and example, to secure its most perfect development, the result being that the Institution now occupies a highly respectable position amongst the scientific societies of the country.

At the present time the members are thrice as numerous as when the Institution was established, and from the very gradual manner in which this increase has taken place the sanguine hopes of its continued progress are fully justified. The holding of migratory meetings is a new phase in the career of the society, and is one which we do not hesitate to say will add to the popularity of the Institution, and augment the benefit accruing from connection with it.

In his opening address at Birmingham, on Tuesday, Mr. WOOD very truly remarked, that owing to their longer experience the coal miners of Northumberland and Durham ought to be enabled to give information of value to their neighbours, whilst for themselves he felt sure that, as they had yet very much to learn, this interchange of experience between the professional men of every district would be productive of great benefit, in advancing the science, art, and practice of mining.

The liberal nature of the North of England Institute of Engineers' arrangements with respect to the Birmingham meeting, as compared with the narrow-minded policy of the members of a kindred institution, who urge that they have ample to occupy them in their own district, needs little comment, but we may express our hope that Mr. WOOD's remark

that the interchange of ideas is as beneficial to the visitors as to those visited will not be without its effects; for we certainly continue to maintain the opinion we have very frequently expressed, that scientific societies conducted upon a selfish policy can only exist in a character at once unsatisfactory to themselves and useless to all around.

Our Northern, Staffordshire, and Derbyshire Correspondents also refer to this interesting event; and, doubtless, from the importance of the proceedings, discussion will ensue on some of the topics, and we may, indeed, have to give one or more of the papers entire, as their contents fully merit extensive publicity.

As evidence of the importance of the North of England Institute of Mining Engineers we may adduce the last part of their Transactions, just issued, which contains papers of the greatest value, including those of Mr. J. J. ATKINSON, the Government Inspector of Collieries, on the "Strength of Tubbing in Shafts, and the Pressures or Forces it has to Resist," and by Mr. E. F. BOYD, "On a part of the Carboniferous or Mountain Lime-stone Series of North Northumberland," beautifully illustrated by diagrams in chromo-lithography, and accompanied by elaborate tables, showing the various strata in the district referred to.

* Translations of

The London and North-Western Company has, therefore, been compelled to lay down a new line of rails for its goods traffic into London. That new line of rails involves outlay of new capital. The outlay of new capital absorbs the increased dividend which would otherwise accrue to the shareholders from their largely increased revenue from minerals and goods. And all this results from the necessity of maintaining the high speeds."

Now, that the carrying of 500,000 tons of coal, in addition to the continuance of the previously existing business of the company, may have necessitated the construction of an additional line for a few miles out of London we can readily imagine, but that the officials of the company should be, by implication, charged with having made needless outlay, which could have been avoided by diminishing the speed, we very much question. With regard to Mr. STEPHENSON's statement that the outlay for making provision for this mineral traffic has been prejudicial to the interests of the North-Western shareholders we also deny, and for these reasons: the lowest average number of miles which it can be estimated that the coal is carried is 100, and as Mr. STEPHENSON declares that 500,000 tons per annum are carried, and as the freight would be about £d. per ton per mile, it follows that the revenue from the carriage of these coals alone is equal to 10 per cent. per annum upon an outlay of 1,000,000.; from this revenue certain charges would, of course, have to be deducted, but still there would remain an amount of profit which would amply compensate for the outlay.

It would appear that Mr. STEPHENSON considers the existing postal arrangements might be modified, on the ground that a few hours in the arrival of a mail cannot make any material difference, and that the Post-office authorities should explain why they seek to enter into competition with the telegraph, which must ultimately be successful. He would have made present admirable postal arrangements retarded, and would have the postal authorities forbidden to incite railway companies to high speeds and long runs. The letter is ably written, and contains a vast amount of practical information, well worthy of perusal, though we do not think it will suggest a remedy for the evil it proposes to deal with.

BROWN COAL PITS NEAR MANSFIELD, PRUSSIAN SAXONY.

BY W. F. JERVIS, F.G.S., MINING ENGINEER.

The chief brown coal pits in the vicinity of Mansfield are those of Neu-glück and Riehstädt. Neu-glück Colliery is situated on the hill at Bornstädt, but is somewhat out of the way of the high road. As there are only 15 ft. of superincumbent clay this is all removed, and the brown coal worked by open-cast. The rapidity with which the operation goes on here may be judged from the fact that each man for his day's earnings of 1s. has to cut out and throw down 14 tons of brown coal. True, it is of an earthy and inferior description, and has to be made into brick-shaped masses with water, in order to fit it for domestic use. At another part of the colliery the brown coal is worked by shafts at a greater depth, where, having been subjected to greater pressure, and been preserved from the influence of the atmosphere, it has not moulder away. The woody fibre has been better preserved, although it has lost the coherence of the particles which it once possessed. The men can only extract 3½ tons per diem from these underground workings. A section of the strata gives:—

Loam, superincumbent clay, and } 3 fms.	Sand..... 6 to 10 fms.
greyish sand	8 fms.
Earthy brown coal	2½ to 3 fms.
White clay, with strata of coal	2 fms.
Brown coal..... 2 to 2½ fms.	clay at the bottom of the series.

First coal, as ex-tracted, costs	4s. 0d. per ton.	Eartly coal, for machin-ery and the use of the poor	1s. 3d. per ton.
Large lumps, picked by hand	4s. 11d. "	Transport to Eisleben, (same for every kind)	4s. 0d. "
Second quality	2s. 5½d. "		
Clay	10 fms. 5 ft. 0 in.	Fourth bed of coal	1 fms. 4 ft. 4 in.
First brown coal bed	0 " 2 " 6 "	Clay	0 " 5 " 3 "
Clay	4 " 3 " 6 "	Fifth bed of coal	0 " 3 " 5 "
Second bed of coal	0 " 3 " 3 "	Clay	1 " 2 " 6 "
Clay	5 " 5 " 3 "	Sixth bed of coal	0 " 5 " 3 "
Third bed, superior	0 " 1 " 9 "	Clay	1 " 0 " 10 "
solid brown coal	3 " 2 " 6 "	Seventh bed of coal	0 " 5 " 3 "

The strata at Riehstädt dip at an angle of 8°. The basin is about 2½ miles long from north-west to south-east, or, as here expressed, lies towards 4 o'clock. The following is a detailed section:—

Firn clay	10 fms. 5 ft. 0 in.	Fourth bed of coal	1 fms. 4 ft. 4 in.
First brown coal bed	0 " 2 " 6 "	Clay	0 " 5 " 3 "
Clay	4 " 3 " 6 "	Fifth bed of coal	0 " 3 " 5 "
Second bed of coal	0 " 3 " 3 "	Clay	1 " 2 " 6 "
Clay	5 " 5 " 3 "	Sixth bed of coal	0 " 5 " 3 "
Third bed, superior	0 " 1 " 9 "	Clay	1 " 0 " 10 "
solid brown coal	3 " 2 " 6 "	Seventh bed of coal	0 " 5 " 3 "

The brown coal is divided into two kinds at the bottom of the pits—solid woody coal (*Stück Kohl*), and fine coal for machinery (*Klare* or *Forder Kohl*). On its arrival at the surface, any lumps of a better quality which may be found in the fine coal are separated by boys with coarse rakes, and constitute the lump coal (*Knorpel Kohl*). The colliers earn for digging out the fine coal 10d. per ton; for hewing out the massive coal from 10d. to 1s. 8d. The quantity of water is very inconsiderable—about 30 cubic feet per minute; it is extracted by a small horizontal engine, built at the Magdesprung Works, which has a 12-in. cylinder, and performs 12-horse power. The quantity of brown coal used for the boilers is about 1 ton in 12 hours.

The levels are distinguished by various names thus:—*Stolln*, or adits. *Grundstrecken* or *Wasserführungsstrecken* do not extend to the open air; the latter communicate with the adit, of which they are the feeders. *Förderstrecken* are the levels provided with tramways for the conveyance of the coal. *Abbaustrecken*, those which are situated in portions of the colliery where the brown coal is being removed, and are consequently being filled in with the removal of the woodwork. As there is never anything like fire-damp in those brown coal pits, ordinary lamps are invariably employed. Two oscillating engines, one of 3 the other of 6-horse power, serve for the extraction of the coal. Step-gates are used for all the furnaces.

One bed is worked away at a time at a given part of the colliery before going deeper; the clay roof is then allowed to fall down, by taking away the wood. After having worked several beds the ground sinks considerably, but the law provides against accidents by establishing a rule that a pillar 30 fms. broad should be left on either side of the high road, or near buildings. No blasting is requisite; the more massive coal is hewn out with axes, the earthy kind is dug out with pickaxes and shovels. The produce of the Riehstädt pits, in 1859, was 382,000 Tonne (about 48,000 tons). There are 250 men, including 132 coal hewers and 61 youths. The common brown coal from these pits, as elsewhere noticed, is largely employed at the Mansfeld Mines for the machinery, and also of late years for the furnaces. Another considerable market is for the distilleries at Nordhausen. The best coal is employed for domestic purposes, but it is a disagreeable kind of fuel from its bituminous odour, and the evolution of a large quantity of water mechanically mixed with it, whereby the room is filled with a constant steam, condensing itself on any cold surfaces, such as glass. The Westphalian Iron-works, however, supply a most graceful and economical kind of stove, in which the brown coal can be burned without these annoyances so much felt. This is a column or rectangular shaft, in which the flame circulates and produces better combustion. The fuel is put in by a door behind the wall of the room; or else the stove, being inserted in a partition-wall, serves to heat two apartments at once.

In the localities I have described the brown coal is found pretty uniformly in beds extending for a considerable distance, it also occurs in local depressions, or small basins, termed nests: these are very disadvantageous to work, and often difficult to drain.

One of the most remarkable brown coal pits which I have visited is that of Prinz Friedrich, at Frankenhäusen. The Tertiary strata are there in close connection with a fault from north-west to south-east, in the older rocks, and are tilted up to 72° or 75° from the horizon, so that the brown coal, which is only 7 or 8 fathoms thick, does not occupy a greater width than that at the surface, which caused it to be long overlooked; indeed, the coal has been only worked about 25 or 30 years.

The vertical section given by the bore commenced Aug. 18, 1858, cutting the brown coal diagonally, would give an idea of far greater thickness: White clay

White clay

Coarse grey sand

Grey sand

Brown sand, mixed with coal

The brown coal is of excellent quality, but the verticality of the bed makes it more expensive to extract. Although it assumes much the nature of the Belgian coal beds, *en dressant*, it is not customary to work it in steps, but to advance a level, taking away the coal for the whole width;

after this a lower level is constructed, leaving 2 fathoms intermediate space, which can only be got at at a future period. Small pipes are inserted on either side of the bed into the uplifted older and younger rocks to collect the drainage waters. Large quantities of comminuted selenite from the neighbouring fault, and which might readily be mistaken for the pure sand, is found in places with the brown coal, and gives the greatest trouble to the men, for it forms a paste with the water, which percolates to this slight depth, and presents its dead weight against the workings, where the wood-work frequently gives way under the lateral thrust. In the month of May, 1860, a fearful slip of semi-fluid selenite quicksand occurred at this pit, by its fall from a lateral nest. Fortunately the men were all in a part where they could immediately rush up the shaft, so that no one was injured. The havoc in the wood-work was only local, but the ventilation was completely destroyed by the choking up of the whole of the levels, the thin white paste alluded to spreading itself in every direction. Not so fortunate was the proprietor of the Louise pits, in Bendeleben, four miles off, and about the same time. The coal being there only inclined at an angle of 45° to the west, occupies a far greater breadth of ground at the surface. This falling in by repeated workings, the coal being already known for a thickness of 100 ft., has caused a large crater above, in which rain water had long lodged without being able to penetrate the clay. One night the clay fell in, and the whole of the pit was instantly filled with fluid mud, the wood in the lower level being likewise completely destroyed. It took three months to take out all the mud and restore the workings to their original condition.

LIST OF BROWN COAL PITS IN THE VICINITY OF MANSFIELD, IN 1857.

Pit	No. of colliers.	Members of families.	Value of coal.	Production in Tonnes.
MANSFIELD LAKE CIRCLE:				
Worked by companies..	33	541	1044 £23,175 £22,022 5d.	1,120,280½
Private pits	4		319 280 13d.	63,881
Royal pit	1	26	1,747 1,596 4½d.	91,741
ANGERHAUSEN CIRCLE:				
Worked by a company..	1	51	62 1,501 1,444 4½d.	85,106
Private pits	5	527	732 18,738 18,735 4½d. to 6d.	740,228½
Royal pit	1	233	390 4,213 4,187 3½d.	302,962
True coal				
Wettin and Lobenau} Royal Mines	333	672	17,259 15,971 —	143,260

N.B.—The Tonne is a measure: 1 Tonne of brown coal weighs about 275 lbs.

GOVERNMENT MINE INSPECTION.

THE NORTH STAFFORDSHIRE, CHESHIRE, AND SHROPSHIRE DISTRICT.

—The remarks of Mr. WYNNE fully bear out the opinions of several other Inspectors, that it is absolutely necessary to compel timber to be set at given distances; to be distinctly stated in the special rules of the colliery, the system of leaving to individual judgment having been proved to be attended with much unnecessary loss of life. Referring to the accidents from falls of roof and coal, he observes that "In the special rules now in force the words 'where necessary' are the guide to propping and spragging. Now, my wish is to strike out those words, and enforce a thorough system of timbering, whether wanted or not, because we find, when a life is lost, the evidence always goes to prove that the place where the deceased stood was one of the safest in the pit; and most likely it was so, but does not that prove my requirement necessary? I am told this is too arbitrary to be carried out, but if it were once tried, the saving of human life and the saving of timber would be so apparent that there would be no desire to return to the old and dangerous system of working under the newly-bared roof, and then propping it up after the work is done. Coal mining must of necessity be a dangerous occupation, even when all the care is taken that human foresight can suggest, which makes it the more imperative on those who have the charge of coal mines to listen with attention to any suggestions that may tend to the security of the workmen; and when I find, on a strict scrutiny of some hundreds of accidents, that two loaders and men of that class are killed by falls of roof to one collier, the numbers employed being about equal, it is high time that something should be done in the way of systematic timbering to reduce fear of fatal catalogue of 400 lives lost by falls of coal and roof to the lowest possible limit, which most certainly is not the case at present. It is unnecessary to report the particulars of each case in the tabular list, they being so much alike, and the remedy in many being so simple. On the question being asked at the inquest—"Would not a prop or two being set (or a sprag, as the case may be) have saved this man's life?" the answer invariably is—"Yes; but we thought it was not necessary;" therefore, I repeat, necessary or not necessary, set the timber, as any reasonable man would do when the support is taken away from any house or superincumbent weight above ground."

The number of deaths in Mr. Wynne's district from explosions has remained at stationary, but he thinks that the casualties would be reduced if the colliery officials could be made to see the necessity of obeying the rules themselves, and making every man under them do the same. "It is useless," says Mr. Wynne, "for coalmasters to make special rules, unless there be some one with sufficient authority underground to see that they are enforced. In a large portion of my district the butty system prevails to such an extent that the proprietor and the workmen may be considered strangers to each other; and the whole charge of the pit is thrown on the charter-master, who, instead of performing the important duty of examining the workmen himself with a safety-lamp previous to the men going down the pit, deputes that duty to a doggy, who is generally chosen for this office not because he is more careful than his fellow-workmen, but because he is more daring than the rest, and most likely to send the largest quantity of coals to the surface. Under these circumstances, we cannot wonder that twelve explosions should take place in the year, nor can we expect to reduce the number. One of the special rules provides that the charter-master or fireman shall go to the pit one hour before the usual time of commencing work; but this is rarely done by either, but still more rarely by the charter-master, who, being the head man, thinks it of more consequence to see that the men go down the pit than to see to their safety when they are there."

That there still remains much to be done for the prevention of shaft accidents is apparent, for Mr. Wynne estimates that of the 16 accidents of this class five only could be considered as unavoidable. The general rule does not make it compulsory to use a cover overhead when the men are ascending and descending unless the Inspector requests it to be done, but he is happy to say the proprietors and managers have generously adopted a special rule, making it obligatory on all to use a cover, which will, he has no doubt, save many lives. Mr. Wynne continues, that so long as the present uncouth method of winding prevails, leaving a wide chasm open of from 8 to 10 feet for men to fall into, it is no wonder that four banksmen should fall into the shafts during the last year, but shows they must be a very careful set of men, or many more lives would be sacrificed. If conductors with moveable fences, to lift with the cage, were generally adopted he ventures to say few lives would be lost by falling down working shafts.

In miscellaneous accidents there was no increase, but two suffocations from black-damp might have been prevented by the smallest amount of caution: by these six lives were sacrificed, and Mr. Wynne considered the cases so disgraceful that proceedings were taken, and convictions obtained in both instances.

COMPRESSED COAL.—The value and importance of an invention which can profitable utilise that great proportion of our great staple product that is now entirely lost, was fully adverted to in last week's Journal. It was there shown, upon the authority of Mr. Alex. Bassett, that 40 per cent. at least was never even brought to surface, as, according to present arrangements, it would not pay for raising. The question of the compression of coal has engaged the attention of mechanical and scientific men for many years, the great difficulty having been to bring about the desired result without the admixture of extraneous cohesive matter. By the amalgamation of several inventions, the patent rights of which have been purchased by the company now before the public, this coveted goal appears to have been reached, it being stated that the smallest coal can be compressed into blocks which occupy one-third the space of ordinary coal, taking but 31 cubic feet to the ton, while raw coal averages from 44 to 48 feet. The process by which these compressed blocks are obtained is inexpensive, and without complication. In the first place the pure coal-dust, or slack, is conveyed through a washing-machine, for the purpose of disconnecting it from any stony particles it may contain. It is then subjected to a steady heat, until its bituminous parts are rendered quite soft, after which it is passed into a moulder machine. This comprises a rotary table, containing the moulds, around which are situated three presses—namely, the feeder, for filling the moulds; the main press, for condensing the block; and the discharger, which removes the block out of the mould, whence it falls

into a travelling web, which carries it away. The presses act simultaneously, and between each stroke the table makes one-third of a revolution, by which the coal is removed from one press to the other. An apparatus is provided for extracting the gases from the coal during pressure, ingeniously opening out the air-passages at each stroke, which would otherwise become choked by the bitumen. In these presses, necessarily of a very powerful description, breakages would be always occurring but for a provision which has been made by the fulcrum of the levers of the main press resting on the ram of an hydraulic press, the safety-valve of which is loaded only to the extent that the strength of the machine will bear. Each machine, which is inexpensive in construction, is capable, it is calculated, of making 28 tons per day, at an estimated cost of 2s. per ton. From having during the process of washing the stony parts removed, and from the lighter gases which produce smoke being driven off during the manufacture, it is said that steam-vessels provided with these blocks of compressed coal will carry fuel for steaming nearly double the number of days; and, moreover, that this fuel is free from the danger of spontaneous combustion. For domestic and manufacturing purposes it is cheaper and cleaner than raw coal. We understand that the company has met with a most favourable reception from the public, and that active operations will forthwith be commenced.</p

Bolckow and Vaughan, for the heavy outlay which they must have incurred. This is the same seam as that proved at the adjoining colliery of Mr. Pease a few weeks ago.

REPORT FROM YORKSHIRE, DERBYSHIRE, AND LANCASHIRE.

JULY 18.—The state of the Iron Trade continues in an extremely unsatisfactory condition, owing to the critical position of affairs in the States. There are very few orders in the hands of manufacturers, and these are chiefly for immediate requirements. The reduction in the rates for manufactured iron has not given that stimulus to the trade which it was expected to do. The system of underselling which has prevailed for some time past has had the effect of making the reduction less generally felt, as it was known that many houses were accepting rates considerably less than those fixed by the trade at quarter-day. The enquiry for rails and railway iron-work has improved, but with this exception we have no favourable prospects to report. A revision of the rates of wages is taking place at numerous establishments, in consideration of the reduction which has had to be made by the ironmasters in the price of manufactured iron. The Steel Trade is very inanimate, and the majority of the manufacturers are only opening their establishments. There is no improvement in the demand from America, everything being dull and unprofitable, and it is difficult to negotiate commercial transactions with safety.

The Coal Trade is improving in these counties, owing in a great measure to the improved tone of the cotton and woolen trades, and the great demand made for hard coal for steam purposes. The rates are lower, except for the hard steam coal.

The deplorable accident at Clay Cross continues to be the topic of conversation in all mining circles, and imparts a melancholy interest to everything around it. Since our last very considerable progress has been made in the pit, and all the bodies of the unfortunate men have been recovered, with the exception of one, a collier named W. Wood, whose remains, it is supposed, have been buried in the debris. The men have been devotedly labouring throughout the week to clear out the mine, so that it can be inspected and surveyed. The greater number of the dead horses have been recovered, and buried in quick lime to forward decomposition, which had rapidly advanced, from the fact that they had been confined in the air. At the inquest, it appeared that Mr. Binns, the manager, had a complete system of underground management, but, as might be expected in a moment of panic and terror which would come over the minds of the men in the moment of learning the accident, several neglected their duty by not acquainting the men of the nature of the danger. There is reason to believe that if the corporal of the pit had given more timely warning the greater number of those who have perished might have been saved. The men themselves, too, were dilatory in taking advantage of the means of escape when the intelligence of the accident was first communicated to them, as they remained in the pit for a considerable time after the accident was first discovered. The company have liberally made provision for the widows and children of these unfortunate men for the present and the future, subject, of course, to certain restrictions. Indeed, the conduct of the company has been most praiseworthy throughout, and no expense has been spared for forward operations. The pit is now being cleared of the carcasses, and the debris which has fallen from the roof in various parts of the mine. As soon as this is effected Mr. Hedley, the Government Inspector, will make an official examination into the state of the pit for the purpose of the inquest. New diallings and pians are being made, with a view to test the accuracy of the old plans, and to ascertain in what way the coals were got, so far as to admit of the prickling of the water. The coroner and the jury appear determined to sift every point to the fullest extent, and they have already furnished ample evidence of their ability to deal with the evidence brought before them. The inquest was adjourned until Aug. 1, to enable the scientific part of the evidence to be fully prepared for the inquest.

The meeting of the Northern Institute of Mining Engineers at Birmingham, this week, has been a great success, and a number of highly valuable papers have been read, Mr. J. T. Woodhouse himself furnishing a very able paper "On the Progress of Mining in Derbyshire."

Several accidents have occurred in collieries this week from various causes incident to mining. They tend to show the great necessity of stricter caution being observed. The dry nature of the weather has been favourable to lead mining in the Peak of Derbyshire, but, excepting Eym and Mill Dam, nothing is being done worth of particular notice. The New Midland will soon be numbered amongst the things that were. The miners at Mill Town are sinking through the tundstone, and they continue to get as much ore as will pay working expenses. The Eym Mine continues to get into better work, and the shareholders are very confident of the great success of their property. A short time ago the prospects of the North Derbyshire Mine appeared to have risen to a successful position, but at present everything is going on very quietly. The sinking operations are both tedious and expensive. The Matlock Lead Mines are doing well, and there is a brighter prospect for them when the railways shall have intersected the romantic scenery of the Peak of Derbyshire. Everything is very quiet in the lead mining share market, the badness of trade putting an almost entire stoppage to speculative purchases.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

JULY 18.—The state of the Iron Trade calls for no new remarks, no abatement of the depression being yet apparent. The absence of any allusion in the brief telegraphic summary of President Lincoln's message which has reached this country to any reduction of the heavy duties imposed upon iron by the Morrill tariff is a circumstance calculated to damp expectations entertained on the subject, though it is possible that a more complete account may show that some such step is contemplated. The notices for the reduction of the wages of puddlers 6d. per ton, and of other men employed in the mills and forges in proportion, expired on Saturday last at many of the works. In most cases the men have abstained from work this week, but in some instances they have gone in, and as many of the notices do not expire until Saturday next it is anticipated that all will resume work at the reduction next week. It usually happens that the men "shackle" for a few days before accepting a reduction of wages, but all accounts concur in anticipating the acceptance of the very moderate reduction of wages made by the masters.

The Hardware Trades of Birmingham and South Staffordshire show no signs of improvement. The accounts from the great manufacturing districts are very unsatisfactory, the depression which exists in the great textile manufactures very sensibly abating the demand for hardware. From Ireland the reports are more hopeful, but there also shopkeepers show an indisposition to order goods. The harvest in that part of the kingdom promises to be early and good, and the prospect is almost equally satisfactory in England. This, indeed, is almost the only bright spot in the commercial horizon. The advices from Australia and the East Indies are more satisfactory, but they rather indicate a more hopeful state of things than any actual improvement in the demand, the orders received being small. Very little is said about the French trade under the new treaty, but it is pretty certain that connections are being established with that country, and that the hardware of this district are quietly making their way amongst our Gallic neighbours.

The Northern Institute of Mining Engineers, under the presidency of Mr. Nicholas Wood, has met in Birmingham this week. This visit of the mining engineers of the North, whose operations are, as a rule, so much greater in extent, and conducted in so much more elaborate a manner to those of South Staffordshire, ought to be productive of much advantage to the district. It is satisfactory that the Institute has received a most cordial welcome, and that every facility has been afforded them of visiting the works and mines of the South Staffordshire coal field. The paper bearing most directly on the mineral interests of this district was read by Mr. Samuel Bailey, the mining engineer of Messrs. J. C. and T. Bagnall, "On Underground engines." Mr. Bailey introduced the subject, alluded to the depression which at present prevails in the iron trade of South Staffordshire, and quoted the remarks of Mr. S. H. Blackwell, which recently appeared in the *Mining Journal*, pointing out that the great obstacle to the prosperity of the iron manufacture in South Staffordshire was the want of a supply of cheap ironstone. Mr. Blackwell urged that this was to be effected partly by a reduction of royalties. Mr. Bailey suggests that it may also be promoted by improving the mining operations, and then diminishing the cost of raising the minerals, and that this must be effected by the mine agents.

Mr. Bailey said—"The present method of underground conveyance in this district was that which had obtained for the last two or three generations. The day, however, had come when they no longer met their requirements. To compete with the cheapness of minerals from other districts, brought about by the facilities in transit offered by the railway communication, they must beatir themselves, and to do this several things demanded their attention. Their winding machinery must be improved, more underground workings must be opened, and skips, wagons, and tramroads must be better constructed, so that instead of raising 7 or 10 skips an hour, 30 or 40 must be raised; and instead of 60 tons per week, 250 or 300 must be raised. Assuming that each of 50 tons of coal were to be worked, 4 or 5 ft. thick, producing 200,000 tons. This, with the present mode of working, would require three or four plants, a quantity not exceeding 300 tons could be raised, and a period of 12 years would be required to work it out. The cost of making these plants would be 50,000/-, or 6d. per ton upon the whole quantity raised, and the additional charge would make the cost raising 6s. per ton, so that the lessee would be 13 years before he received back his first outlay. If, instead of the present method, one good plant were made, even at a cost of 50,000/-, if the pit were driven out more extensively, if the speed of winding-works were increased, and if, instead of employing 10 or 15 horses and drivers to raise 300 or 400 tons per week, an engine were put down which, with the assistance of five or six horses, would raise 1000 or 1500 tons per week, then the common charges, instead of being 1s. or 1s. 6d. per ton, would be reduced to 6d., and in some cases to 3d., and the seam of coal would be worked out in one-third of the usual period."

Mr. Wood, the Chairman, remarked that in the North it was usually considered that when three horses were used for underground conveyance it was a grave question whether an engine ought not to be put down; and that when five horses were required it was a settled question that an engine should be at once set to work.

The importance of such associations as these have often been urged in this letter, and it is to be hoped that the visit of the Northern Institute may lead to the establishment of a similar local association in South Staffordshire.

[The general proceedings of this interesting meeting are reported very fully elsewhere.]

Mr. S. Griffiths, in his "Iron Trade Circular," referring to the Iron-masters' quarterly meeting, says—"We believe the ruling price of hematites was 32. 2s. 6d., delivered; nevertheless, one house, Cleator Moor, sold, as we were informed, at higher rates. The Kirkless Hall Company preferred holding their pigs for better prices, their sales, therefore, were very trifling indeed. On the whole, the Birmingham meeting was highly satisfactory, and augurs well for the future. The demand, particularly for Italy and Russia, is good, the home trade satisfactory, and with India settling down, and China thoroughly opened; we consider the prospects of the trade improved rather than otherwise. The sales of pig-iron were, Old Windmill End, 2000 tons; Mathew's, Corby's Hall, 2000 tons; Old Park, Shropshire, 3000 tons; Cinderford Company, Forest of Dean, 2500 tons; Gibbons', Millfields, 3000 tons; Lilleshall Company, 12,000 tons; Schneider, Hannay, and Co., Barrow, 7000 tons; Cleator Moor, 3000 tons; Workington Company, 3400 tons. Considerable sales were likewise effected of the top Staffordshire brands of mine iron, including the Union, Addenbrooke's, Wards, Colbourn's,

and some others of inferior make. On the whole, the business done in pig-iron was large, indeed above the usual average; the manufacturers are evidently impressed with the opinion that pig-iron here has reached its very lowest point, and for the first time during the last three years capitalists are turning their attention to this article. A wealthy coal proprietor in the neighbourhood of West Bromwich purchased 2000 tons of pigs for cash, on speculation, and we have no hesitation in saying that this gentleman is going into the market at the right time."

REPORT FROM MONMOUTH AND SOUTH WALES.

NEWPORT, CARDIFF, AND SWANSEA, JULY 18.—The trade of the Swansea valley wears a smiling and encouraging aspect. During the last winter there was a great stagnation, and hundreds were out of employ for several months. At the present time the colliers, miners, forgemen, labourers, &c., have a fair amount of work. At Ynyspenlwyd the men, on an average, work five days a week. Everything goes on well at Morriston: the works of Messrs. Hallam are in full employ, and the iron-works lately established by Mr. John Jenkins are progressing favourably. The Coal Trade is exceedingly brisk, and various efforts are made to develop the precious mineral more extensively. Messrs. Pegg are realising all their expectations in connection with the Two Sisters Pit. Mr. C. H. Smith is sinking a shaft near the Swansea Vale Railway, at Llanasamlet. At Pontardawe the coal works are in full operation, and this district promises to be a very important one as regards the coal trade. Messrs. Lewis and Morgans are sinking a magnificent pit at Cwmcarnlwyd, which is fast reaching completion. The spirited proprietors expect great results from their undertaking, and the immense capital which has been laid out on the pit fully entitles them to every success. The various railway schemes now in Parliament which are connected with this neighbourhood command considerable attention. The South Wales Company have succeeded as far as the preamble of their bill is concerned, but the Committee of the House of Commons recommended that either an agreement should be come to with the Great Western, or the bill had better be postponed until next session, as there was no chance of its getting through its various stages this session. The South Wales Company, acting on the committee's recommendation, have withdrawn the bill. On the other hand, the inhabitants of Swansea complain that while the South Wales Company are attempting to rid themselves of the Great Western monopoly, they are at the same time grasping at every little railway in the district. Some time ago a line of railway was projected from Swansea to Neath, which was to connect Swansea, by the narrow gauge, with the belt of railways that ran to the Midland and the North. The scheme was taken into the Commons by the South Wales Company, but failing in their attempt to get the bill through, they have since relinquished the whole scheme. The Vale of Neath Company being specially interested in the construction of the line, the directors called a Wharcliffe meeting, in order to decide how to proceed. Several South Wales directors attended, and attempted to annul the proceedings by their proxies, but Mr. Bruce, the Chairman, ruled that these proxies could not be received, as they were tendered without the direct and collective authority of the South Wales board of directors. The result was that the meeting decided to proceed with the bill to the House of Lords, and in this they will be well supported by public opinion. The Derwent Valley line has passed the Commons, and this week it will go into committee in the Lords. At Hirwaun things look very gloomy. It is rumoured that Mr. Francis Crawshay is not likely to obtain a renewal of his lease. If this prove correct, the once flourishing Hirwaun will be doomed, as the inhabitants almost entirely depend on Mr. Crawshay's works. Hundreds of cottages are already vacant in consequence of the partial stoppage which has occurred.

The Meat Strike continues at Beaumaris, Blaenavon, Tredegar, Blaina, Ebbw Vale, and the immediate locality. The men seem determined to buy no meat until the present exorbitant prices are reduced. Several butchers have already commenced selling their meat at 6d. per lb.

The colliers employed at Varteg, Cwmsfrwd, and the Glynos Works are out on strike against the proposed reduction of 2d. per ton. The men contend that they should not be ruled by the iron-works, and they require payments monthly, and a draw every fortnight. To the short-pay system and money once a fortnight the masters have agreed, but as regards the reduction there can be no compromise, as the masters are obliged to resort to it.

The Blaenavon New Railway Tyre Works were started on Monday, the 9th inst. The machinery used at these works are a perfect model, and the whole of which, with the exception of a 34-inch cylinder engine, constructed by Messrs. James Watt and Co., of Soho, and used for driving the heavy machinery, were made at Blaenavon, under the direct superintendence of Mr. Thomas, the engineer of the works. After a week or fortnight's practice it is expected that the men will be able to make any number of perfectly finished tyres, with as much ease as an ordinary bolt or bar. The advantages which these tyres possess over those made in the ordinary way are as follows:—They are rolled out of a solid mass of iron, thus obviating the necessity of smiths' work; the interior of the tyre is made of tough fibrous iron, and the exterior of close crystallised iron, and they are made to any section and size up to 8 feet, and when shrunk on the wheel, being perfectly smooth and true, require no turning, thereby saving a considerable expense, and leaving the hard substance of the tyre for wear.

On Monday, an accident occurred to Lewis Thomas, a collier in the employ of Messrs. Fowler Brothers, Pontypridd. A quantity of the top fell on him while at work, and he was seriously injured; medical assistance was immediately procured, and the unfortunate sufferer is progressing favourably.

The Risca colliers are out on strike in consequence of certain new rules having been issued, which the men allege will end in a reduction of the price of cutting. The new rules are framed on the recommendations of the jury at the late inquest, and principally refer to the timbering and bratticing. In the South Wales district it has always been the practice for the colliers themselves to brattice as they go on, but as this is so often neglected, or imperfectly done, to the detriment of human life, the manager of the Risca Colliery determined to adopt the North of England system of appointing timbermen. To this the men object, and consequently the turn-out referred to.

The Newport Docks are fuller this week than has been the case for some time, and there are indications of better times. On Friday one of the Greek Oriental Steam Navigation Company's fine steamers left the port for Ancona, having taken in a cargo of 1000 tons of railway iron and 500 tons of coal. On Tuesday the *Empire State* arrived, and several other large vessels. The *Empire State* has been chartered to Genoa, and she has commenced loading 1800 tons of iron from the Tredegar Iron Company. At Cardiff matters remain about the same. A large number of vessels have arrived, but there is as yet no improvement in business.

THE CLEVELAND IRON TRADE.—It will be seen on reference to Browne's *Export List*, that the exports to foreign ports of pig-iron from the Cleveland district for the first six months of 1861, as compared with the same period last year, present the following very remarkable results:

Port.	1860.	1861.
Middlesbrough	Tons 13,610	28,351
Hartlepool and West Hartlepool	4,861	9,106
Stockton	nil	105
Total	Tons 18,471	37,562
Increase of 1861	19,091 tons.	

IRON-MAKING IN WILTSHIRE.—In answer to a paragraph which appeared in last week's Journal, we learn that the furnaces of the Seend Iron Company were blown-out, to make some improvements in their construction, and for the application of the gas apparatus, by which a vast reduction in the cost of fuel will be effected. Two or three additional furnaces will be immediately erected, and it is hoped that the works will be in partial operation in a few weeks, and the entire number of furnaces in full work by the end of the year. The shares, we understand, have been allotted. We are also glad to find it is the intention of the directors to publish periodically the amount of iron made and sold each month, and to give publicity to the progress of the company. When the entire number of the new furnaces are completed there will be five at Seend. At Westbury there are two furnaces, and steps are taking by another company to erect in the neighbourhood of Westbury two or three more, so that we may soon anticipate Wiltshire taking her place amongst the iron-producing counties of Great Britain. There are rumours of large iron-works being erected at Bristol for the express purpose of working the Wiltshire pig-iron, and thus saving the cost of the carriage to Staffordshire and other districts. If this should be so, unusual advantages must be secured by the Wiltshire smelters.

BITUMINISED PAPER PIPE.—This commercially valuable and interesting invention is gradually gaining public support, having proved itself superior to what was predicted of it even by those most intimately acquainted with its capabilities. Superior to iron pipes both in durability and strength, they are, from their inoxadibility free from the objections which are continually being urged against the employment of that metal for the conveyance of water; possessing all the qualities necessary for the conveyance of any liquid, however admixed with mineral, and compared with iron, being but one-fifth its weight and one-half its cost, they are peculiarly adaptable to mining and colliery operations, in proof of which it may be mentioned that an order is now in course of execution for a supply of the company's pipes to the Hetton Colliery. At Osborne House, where the pipes have been laid for some time, the most satisfactory results have accrued, as prior to their adoption it was a matter of great discomfit to the members of the Royal Family that nothing but disturbed water could be obtained. Experience has proved that the drier the soil through which iron pipes pass, the greater is the oxidation; whereas in damp clayey soils the oxidation is comparatively slight. Both at Aldershot and Victoria Docks, the dryness of the soil caused the most rapid oxidation of the iron pipes, and the consequent discoloration of the water which was conveyed by them. By the adoption of the bituminised paper pipes, however, this great objection has been altogether removed, as it is impossible for the fluid they convey becoming impregnated with any foreign substance. At the present time there appears to be a great excitement in Victoria, Australia, with regard to the insufficient supply of water to the gold fields, to remedy which the Government voted 50,000/-, to be expended in the construction of reservoirs. That, however, has proved inadequate to the emergency; and by the last mail from Melbourne we learn that a joint-stock company was about to be formed to provide the different fields with an abundant supply of this very necessary element in the carrying on of the mining operations; the necessity of some such arrangement as this was the greater, for the produce of gold has lately materially

decreased by reason of an inadequate supply of water. It was felt by the authorities in Melbourne that this important work would be materially facilitated by the employment of the bituminised pipes, the question of their adoption being then under consideration. As compared with iron, the saving upon their carriage into the interior would alone be very great, on account of their lightness, the difference being as much as four miles of bituminised pipes to one of iron. By the application of a new cement of great strength for the joints, and an ingenious plan of tapping, this important invention may now be confidently stated to be complete in all its details, and one that will, when better known, be generally adopted.

TRUTH'S ECHOES; OR SAYINGS AND DOINGS IN MINING.

There has been more activity in the Mining Share Market this week than for some time past; not that any positive improvement has taken place, for there is still an absence of general business. The account-day may have had some influence, as those who are punctual in delivery are anxious to get in their "bear" on that day: consequently Monday and Tuesday were rather more busy days, as the latter was the day of settlement for shares during the past fortnight. The account passed off as usual—long countenances and much wrangling, the want of stock with some, and the shortness of money with others; still the day passed off as usual! It is to be hoped, from the depression in the price of shares which has continued for so long, that it has arrived at that point when a turn may be expected, and there are strong appearances favouring an improvement in the market, and this, I think, will shortly take place, if experience be of any value as a guide. A further decline has taken place in the standard for copper, and the ticketings of the week.

EAST BASSET shares continue heavy.—**STRAY PARK** shares have been done at lower prices, with a lower tendency.—**SOUTH FRANCIS** shares have changed hands at lower rates.—Enquiry for **DING DONG** and **OLD TOLGUS** UNITED shares, at improved rates, are being made, arising from reported improvements in both mines.—**NORTH TREKKERY** shares continue heavy, and business done at rates.—**PROVIDENCE** shares are without notice at present rates.—**EAST GREENVILLE** shares, as usual, have been freely dealt in, and buyers found at market prices.—**GREAT RETALLACK** shares are without notice at present rates.—**EAST CARADON** shares have been in good demand all the week, but on receipt of the intelligence that the caunter had improved a further advance took place, which is well maintained.—**MARKE VALLEY** shares are in request, and several transactions followed, but a little weaker in price since the dividend.—**WEST CARADON** shares have been more in demand, at improved rates, arising from a rumour of a slight change in the mine.—**HERDFOOT** and **LUDCROFT** shares have been dealt in, at lower rates.—**MARY ANN** and **TEELAWNY** shares continue heavy.—**EAST RUSSELL** shares have advanced on former quotations.—**SORTHIDE** shares are firm at present prices.—**LADY BERTHA** and **CHEBOK** shares are more freely offered, the former at very low rates.—**GREAT WHEAL MARTHA** shares have been in good demand, and several transactions followed, but at lower prices than quoted.

At **EAST CARADON**, the favourable change which has been anticipated for some days past has taken place. The caunter lode, in the 60 west, which, at the meeting of last Thursday week, was represented to be worth 60/- per fm., and east 35/-, is now valued at 75/- per fm. and full 60/- east, with every appearance of further and great improvements.

sent such favourable appearances as Wheal Norris is now showing; we, therefore, look forward with much confidence to seeing this mine become another rich prize in the Caradon district. MARKE VALLEY is a mine that scarcely requires one word from the pen of anyone to recommend it to the notice of those who desire to invest in a steady dividend property. For the benefit of our readers we insert a report from an agent who inspected the mine a short time since, from which they can draw their own conclusions. In sympathy with other mines, WHEAL MOYLE and NORTH MINERA shares are for the moment rather lower in price; both of these mines, however, we confidently assert, are steadily progressing towards a state of prosperity which will be lasting when they become properly developed. It being our intention to spend a few days in the locality of the latter mine during the coming week, our readers shall have a few particulars due course relative to its present real position. GREAT WHEEL MARTHA shares have receded, owing more to the dullness in business than from any falling off in prospects. The mine we are assured is looking well, and opening up large reserves.

P.S.—The report from NORTH MINERA states that a new discovery of lead has taken place, 50 tons of lead have been sampled, and the mine altogether never looked so well.

FOREIGN MINES.

ALTEN AND QUÄNANGEN.—C. Trelease, June 28: Raipas: In the 20 small shoot of ore still holds out promising indications, and now yields about 1 ton of good work per fathom. The 10 fm. level roof slope, on the heavy spar lode, yields 1½ ton of ore per fathom, but our progress here is slow, owing to the hardness of the ground. In the 10 north-west the ground has also been hard of late, but during the last week small strings of ore have been met with, and appearances lead us to expect a favourable change. The water and ice is, as usual, very troublesome at this time of the year, but the former has abated considerably in the last few days.—Old Mine: In the 10 south the lode is somewhat disordered by the cross-facings recently met with, though it now again yields some good work, with a promising appearance. The lode continues about the same size in the roof slope, and yields 5 tons of ore per fathom. In Bergmester's stop the lode is large, but the matrix at present is highly quartzose, and the yield of ore is not quite so good as before. In No. 1 foot stop the lode is 7 feet wide, yielding 3 tons of ore per fathom. The level south from Pederson's rise looks well, where the lode is 6 ft. wide, yielding from 4½ to 5 tons of ore per fathom. The foot slope has not undergone any change to speak of since my last, the lode being regular, yielding 4 tons of ore per fathom. In the foot slope north of the rise the lode is large, over 1 fm. wide, with masses of ore work disseminated throughout, averaging full 3½ tons per fathom. In the working further north the lode continues large, with good work irregularly intermixed, but not much has been done at this point of late, the men being mostly employed unloading the colliers, &c. We are driving both north and south on the lode in the midway cross-cut; its size varies from 1 to 2 ft. wide, with a very favourable appearance, and during the last week it has turned out good saving work. At the small concerns there is no new feature calling for remark, where our proceedings have latterly been rendered irregular by the constant demand for men at the smelting-houses and other places, but the greatest bulk of the work, such as unloading coal, &c., is now being got through, so that we can hope to go on with more regularity again hereafter.—Quänangen: Advices were received from this concern a few days since, which stated that the appearance of the different workings continued much the same as last reported. Up to the close of last week the weather continued unsettled and cold, with snow-falls, consequently but little has been done as yet towards dressing the stocks accumulated during the winter, but at present it is fine weather, which we shall not neglect to make good use of.

COPAPO.—Checo Mine—Estimated produce for May:—1st class ore, 150 qntis. of 17 per cent.; 2d class, 250 qntis. of 14 per cent. The lode in the chifon sinking under the 50 is 3 ft. wide, with a kindly appearance, but nothing to value. The lode in the 50 ends, east and west of winze, is poor. The lode in the 40 west is producing about 1 ton of 17 per cent. ore to the fathom. The 40, driving west on middle lode, is still poor. The lode in the 30 fm. level slopes, on north lode, is 3 feet wide, worth 3 tons of 17 per cent. ore to the fathom. The 20, driving west on middle lode, is producing about 1 ton of 17 per cent. ore to the fathom. The lode in the chifon sinking at the western part of the set is large and poor. No. 1 chifon, sinking under the 10, is poor. No. 2 chifon, sinking under the 10, is still producing a little ore. At Cole's shaft, the lode sinking under the 20 is 2 ft. wide, poor. We have for the present suspended driving on the 20 ends east and west, and have removed the men to the 30 in the slopes on the north lode.—Ducineca Mine: Estimated produce for May:—1st class ore, 50 qntis. of 18 per cent.; 2d class, 250 qntis. of 18 per cent. No. 1 chifon is producing about ½ ton of ore to the fathom. The slopes in the bottom of the 30 south are producing 1½ ton of ore to the fathom.—A. ANTHONY.

EAST KONGSBERG.—July 6: Sundse: We have sunk the gesenk, or shaft, in this mine about 5 feet, and carried the same 1½ fm. long and 1 fm. wide; in this sinking we have only tried the principal vein, leaving the small vein or drum in the south side standing. In the beginning of June we had the favourable or productive fabband, and in sinking upon it the vein yielded rich silver ore (mittler). In the latter part of the month we came upon another fabband, and while we were sinking upon it the vein was unproductive. We have lately begun with six men to stop the south side of the gesenk, where the drum was left standing, and also to stop the east side of the gesenk, where the principal vein is seen crossing the favourable fabband. The drum is at present yielding native silver at every blast, and we have no doubt the principal vein will also prove productive when we come into the proper fabband, which will be in a few days.—Ramsund: In this mine we have carried two stops to the east of the gesenk upon the principal vein, with four men; the vein in these stops has yielded native silver, principally scheiderite, but within the last few days it is rather poor; however, we have good hopes as we sink further, and continue the stops eastward, that it will again prove productive. The fabbands at this mine are the same upon which the great mine of Anna Sophia was worked, and the vein itself has all the indications which experience teaches us lead to favourable results. The east feitor, or cross-cut, in the 6½ fm. level, on the southern vein, has been driven 5 ft., but without good results; we have, consequently, suspended the driving of it in the meantime: we have begun to clear away the old drift from the north side of this mine preparatory to driving an adit into it; this adit will only be about 6 fms. long, and will come into the mine at a depth of 4½ fms. from surface, and when finished will save great cost in drawing stuff to surface.—Anna Sophia: We commenced this cross-cut upon one of the best fabbands, which we could see; our object in driving this cross-cut is to intersect some of the east and west silver veins of Anna Sophia, which run parallel with the adit.—Neues Glück: The men employed in driving this adit have this month been principally engaged in blasting the roof and sides to improve the ventilation, and in levelling the bottom of the adit.—South Neues Glück Shaft: We have forked the water in the shaft to the counter adit, which is 9½ fms. from surface, and have begun to drive the same; we have found that no more ground was driven than was represented in the old chart formerly alluded to, and, consequently, according to Mr. Fries' survey, there remain about 9 or 10 fms. to drive to open the communication to the mine. Under date July 8, the report is that the drum at Ramsund continues to give silver at every blast.

CLARENDON CONSOLS.—Josiah Martin, June 21: Stamford Hill Mine:

Since I last wrote we have cased and divided the engine-shaft from the 82 to the 92, brought the whim-kibble to draw up the stuff, and have driven about 2 fms. east on the south part of the lode, where it is about 2½ ft. wide, composed of red clay, oxide of iron, and a little white prian; in the first 2 or 3 feet driven we have met with some stones of yellow copper ore, but the end at this time is getting near the large cross-course, and the lode appears to be broken up; we shall now commence to drive north to cut the north part of the lode. I think we have from 6 to 7 fathoms to drive should the two lodes keep the same underlie as seen at the 82. There will be no time lost in pushing on the driving at this point now as we have all things in readiness to draw up the stuff the men are breaking. In the 82 west, on the north part of the lode, the lode is 3 ft. wide, and worth full 1 ton of good ore per fm., a very pretty looking lode; by the appearance of what we see in this rise this lode has not been seen at the 70; this we shall soon prove by pushing up the rise, every fathom will tell more; we are leaving stopping ground in each end of the rise. The 70 west, on the south part of the lode, is without any alteration to notice, except letting out more water. In the 46 west, on the new lode, the lode is about 3 feet wide, composed of black oxide of copper, green carbonate and prian, with gossan, and letting out water freely; this is as pretty a looking lode as any one would like to see; the ground is good for driving, and is now set at 50s. per fm. The water has increased a little in the shaft, owing to the constant rain we have had for the last two months; therefore we have had to work our engine much faster than usual. The engine and pumps are working well, and all the men are pushing on comfortably together. We still have rain every day; the natives say they never saw such weather. We cannot do anything towards taking the dressed ore to the wharf. We are still pushing on the dressing as fast as the weather will admit.

CENTRAL AMERICAN.—Alotenque, May 25: San Pantaleon: During the month our timbermen have been engaged repairing Cornubia engine-shaft above San Vicente level, where several sets of timber had to be changed.—San Vicente: The lode in Alotenque's stop, in the back of this level, is 20 in. wide, worth from 3 to 4 cwt.s. of rich ore per fathom.—San Damiano: In No. 6 stop, in the back of this level, the lode is 2½ feet wide, producing a little good saving work, and presents a most promising appearance.—Dolores: No. 1 winze, sinking from this level, on the eastern side of No. 2 cross-course, has been sunk by six men 9½ vars, at 6½ per var; here the lode has continued very productive throughout the month. In the bottom of this winze the vein is now 15 in. wide, worth from 25 to 30 cwt.s. of rich silver ore per fathom.—San Juan, or the 10 fm. level under Dolores: In the cross-cut north, driving towards the main lode, east from Cornubia engine-shaft, on the eastern side of No. 2 cross-course, 7 vars have been driven by three Englishmen and six natives; at this point the lode has been cut, showing a heave to the north of about 33 vars.: 3 vars have since been driven east on the course of the lode, which is from 30 in. to 2 feet wide, worth from 30 to 35 cwt.s. of rich ore per fathom. This end is very wet, so much so that we have been unable to drain the mine, and there is still some 4 or 5 ft. of water in the levels. Our smiths and carpenters are busily engaged about the new 7-in. lift, which we hope to set fixed and working about the end of next week. In Wasley's stop, in the back of this level, west from Cornubia engine-shaft, the lode is 20 in. wide, producing 4 cwt.s. of rich silver ore per fathom. The lode in Kelly's stop, in the back of the same level, west from Cornubia engine-shaft, is 2 feet wide, worth about 3 cwt.s. of good "broza" per fathom, with promising indications of becoming more productive.—San Alfonso Deep Adit: This level has been advanced, by six men, 2½ vars, 1 var at \$12, and 1½ vars at \$16 per var. The ground here continues very hard.—San Antonio Mine: Six men have driven the level extending east from Ellery's shaft, which was commenced at the early part of the month, 15½ vars, at 9 per var; the lode in this end is from 3 to 4 feet wide, composed of foolcan and mundic, with a branch of gossan against the north wall, which has a most promising appearance. In the same level, extending west from Ellery's shaft, the lode is 5 ft. wide, chiefly of decomposed porphyry, mixed with iron pyrites and a little calc-spar, but is without ore veins.—Santa Rosalia Mine: Six men have driven the cross-cut south, driving towards the main lode, 8 vars, at 8½ per var; the ground, which consists of a loose porphyry, is pretty free for driving. The winze sinking from this level has been sunk, by four men, 1 var, at 9 per var, when water was reached, so that we were obliged to suspend the sinking of this winze until the lode is cut in the new cross-cut. The vein continued just the same as last reported, being 20 in. wide, worth about 4 cwt.s. of good quality ore per fathom: 50 tons of ore were raised and dressed in the month of May, averaging on the average 200 ozs. of silver in the ton.

Jane 1.—I have again the pleasure of transmitting to you detailed reports of the past month's working, both at the mines and haciendas. Although the want of a full complement of workpeople is still felt, and which inevitably proves a drawback sufficiently annoying to us all, I cannot but view the general tenor of the above reports in a favourable light.—Mines: It is with very great satisfaction that I refer to the discovery at the point of intersection of the lode, San Pantaleon, in the cross-cut San Juan level east, where to-day I had the pleasure of examining a lode 2 ft. wide, grey throughout, with

a branch of nearly solid ore 7 in. wide. In the short extent of driving on the course of the vein up to this date, its productiveness has improved considerably. A fathom of such ground as now visible in the end would not be worth less than 150s. In the winze now being sunk 4 fms. to the east the lode continues productive; we can, therefore, count on the included piece of ground yielding a rich supply of ore. Our little steam-engine can scarcely drain the mine with the present diameter of pump, and unfortunately the introduction of the new 7-in. lift has been retarded in consequence of the illness of our principal blacksmith; we hope, however, to get it fixed in the cistern in the course of a few days, when the sinking of Cornubia shaft will be at once recommenced. The water is observed to be decreasing fast in the end of San Juan level; with the new lift, therefore, we expect to meet no difficulty in getting it.—Transmission of Ore: The total number of 89 bags has been dispatched during May month for shipment to England, all containing first-class ore. During the coming week about 100 cargos (200 bags) will be dispatched to Sonsonate, and I intend to continue sending away as much of first-class ore as I possibly can. All the mules will return loaded with salt.—Hacienda de San Jose: Mr. Beeger's enclosed report gives full particulars of the reduction operations carried out during the past month; notwithstanding various drawbacks, it is satisfactory, I think, to see that upwards of 97 tons of ore were subjected to barrel amalgamation, and that, from April 26 to May 26, 12 bars of silver were produced, weighing 921 marcos (7 ozs.). These were dispatched to the Mint at the latter date.—N.B. 59 bags of silver ore have arrived at Southampton.

ST. JOHN DEL REY.—By Telegraph: June—Produce for May, 41,114 oits.; cost for ditto, 9,091l.; profit for ditto, 6,429l.; produce 10 days of June, 12,336 oits.

tunnels, by which means the water is again forced up the pipe, and overflows at the top. The supply of air necessary to drive the machinery can be obtained from any part of the tubes, said tubes being provided with taps and safety-valves at top.

RAILWAY WHEELS AND AXLES.—An invention has been patented by Mr. E. B. Wilson, of Parliament-street, which relates to the manufacture of railway wheels, tyres, axles, and points and crossings, also ordnance gun-barrels, tubes, and metal cylinders generally, and consists in shaping and compressing such articles, after they have been cast or forged, by the aid of suitable dies, acted upon by hydraulic pressure.

GOLD AND SILVER AMALGAMATION.—Dr. J. B. Beers, of San Francisco, California, has invented an improved amalgamator for the reduction of gold and silver ores. The chief advantage which the machine possesses is that it cleans and brightens the gold without any grinding or loss of mercury. It requires but one-tenth the labour and attention of an ordinary amalgamator, while the percentage of gold saved is nearly doubled. The amalgamators are circular pans, with rifled bottoms, upon which the material under treatment is ground.

NEW GOLD-CRUSHER.—An improved machine, for which the inventor claims indisputable capability to reduce the quartz to the finest powder, rapid reduction, portability, and cheapness, has recently been introduced in the Castlemaine district (Australia) by Mr. F. O. Camroux. The principle consists in the simple action of two conical discs, with corrugations, set face to face at an angle of 85°, but revolving in the same direction, each on its own axis. The discs are driven from the same shaft by a spur-wheel and pinion, at a speed of 300 revolutions per minute, by the aid of a 5-horse power engine, and these being enclosed by a casing, the quartz or schist, cement, or other mineral passed into the machine, cannot leave it until completely pulverised. The entire machine is fitted to a cast-iron foundation-plate, 4 ft. square, so that it can be easily conveyed by dray to any locality desired.

MANUFACTURE OF IRON.—Dr. S. Thompson, Motherwell, proposes to improve the quality of iron by passing through it either in the blast or cupola furnace saturated or superheated steam, either in combination with ordinary blast or otherwise.

A wrought-iron gun, made in the reign of Henry VI., was cut open in the Royal gun factories, Woolwich, last week, for the purpose of ascertaining the nature of its construction. The gun has proved to be similar to the ordnance designed a few years ago by Mr. Dundas, of Dundas Castle, North Briton, and consists of longitudinal staves, or bars, built up and hoop'd with a series of outer rings, the interspaces being run in with lead. The process has undergone much examination and scientific scrutiny.

THAMES TUNNEL COMPANY.—Receipts for the week ending July 13, 621. 14s. 4d.; number of passengers, 15,052.

HOLLOWAY'S OINTMENT AND PILLS—MEASLES, BRONCHITIS, CHES COMPLAINTS.—It is unusual for measles to be so rife at this season of the year, and the proportion of disastrous results has been uncommonly large. The malady has prevailed throughout every class; even royalty itself has not escaped. Holloway's ointment, well rubbed twice a day on the neck, throat, and chest causes the rash peculiar to measles to come out freely, and remain out fully till it may subside without danger. Bronchitis, pneumonia, and other chest complaints arise from prematurely repressing this sanitary rash, which this ointment always encourages to remain patent. It is advisable to administer moderate doses of Holloway's pills during the course of each case, and to increase the dose as the disease declines, as judicious purgation prevents subsequent disorders.

India Office.

BY ORDER OF THE SECRETARY OF STATE FOR INDIA IN COUNCIL.—Notice is hereby given that the DIRECTOR-GENERAL OF STORES FOR INDIA will be READY, on or before MONDAY, the 22d July next, to RECEIVE PROPOSALS in writing, sealed up, from such persons as may be willing to SUPPLY—
SHEET COPPER AND COPPER BOLTS AND RIVETS.

And that the conditions of the said contract may be had on application at the India Store office, Cannon-row, Westminster, where the proposals are to be left any time before Two o'clock p.m. of the said 22d of July, 1861, after which hour no tender will be received.

GERALD C. TALBOT, Director-General.

India Office.

BY ORDER OF THE SECRETARY OF STATE FOR INDIA IN COUNCIL.—Notice is hereby given that the DIRECTOR-GENERAL OF STORES FOR INDIA will be READY, on or before MONDAY, the 29th July, 1861, to RECEIVE PROPOSALS in writing, sealed up, from such persons as may be willing to SUPPLY—
BRITISH IRON.

And that the conditions of the said contract may be had on application at the India Store Office, Cannon-row, Westminster, where the proposals are to be left any time before Two o'clock p.m. of the said 29th of July, 1861, after which hour no tender will be received.

GERALD C. TALBOT, Director-General.

India Office.

BY ORDER OF THE SECRETARY OF STATE FOR INDIA IN COUNCIL.—Notice is hereby given that the DIRECTOR-GENERAL OF STORES FOR INDIA will be READY, on or before MONDAY, the 29th July, 1861, to RECEIVE PROPOSALS, in writing, sealed up, from such persons as may be willing to SUPPLY—
IRONMONGERY.

And that the conditions of the said contract may be had on application at the India Store Office, Cannon-row, Westminster, where the proposals are to be left any time before Two o'clock p.m. of the said 29th of July, 1861, after which hour no tender will be received.

GERALD C. TALBOT, Director-General.

India Office.

BY ORDER OF THE SECRETARY OF STATE FOR INDIA IN COUNCIL.—Notice is hereby given that the DIRECTOR-GENERAL OF STORES FOR INDIA will be HELD, on TUESDAY, the 23d of July, 1861, at Three o'clock precisely, to consider the propriety of winding-up the company voluntarily, and, if so determined, to appoint a liquidator or liquidators, in conformity with the Joint-Stock Companies Acts, 1856, 1857; and, if a resolution to the above effect be carried, then to take into consideration a proposition for forming a new company for the purchase of the agreements for leases held by the said company, and upon such terms as the meeting may determine upon.

By order of the Board of Directors, A. TREGONING, Manager.

185, Gresham House, Old Broad-street, London, July 13, 1861.

CONSOLIDATED COPPER MINES OF COBRE.—Notice is hereby given, that a HALF-YEARLY GENERAL MEETING of the proprietors of this association will be HELD at the offices of the company, in conformity with the Deed of Settlement, on TUESDAY, the 30th of July inst., at One o'clock precisely.

And notice is hereby given, that at the said half-yearly general meeting the election of a director of the company will take place, to supply the vacancy in the direction occasioned by the death of the late Charles William Grenfell, Esq. The shareholders will also have to elect at the said meeting an auditor, in the place of Pascoe Charles Glyn, Esq., resigned.

It is necessary that persons intending to offer themselves as candidates for the direction or auditorship should leave notice of such their intention at the offices of the company, at least 14 days before the day of election, and exclusive thereof.

WALTER SHARP, Directors of the GEO. WHITMORE, Company.

Gresham House, Old Broad-street, London, July 13, 1861.

187, Gresham House, Old Broad-street, London, July 15, 1861.

MARIQUITA AND NEW GRANADA MINING COMPANY.—The NINTH GENERAL ANNUAL MEETING of the shareholders in this company will be HELD at the London Tavern, Bishopsgate-street, in the City of London, on Monday, the 29th July, at Two o'clock precisely.

The Transfer-books of this company will be closed for seven clear days prior to the meeting.

L. R. JONES, Secretary.

2, New Bank-buildings, London, E.C., July 18, 1861.

PORT PHILLIP AND COLONIAL GOLD MINING COMPANY.—Incorporated by Royal Charter.

Notice is hereby given, that an

JULY 20, 1861.

COMPRESSED COAL COMPANY (LIMITED).

Incorporated under the 19th and 20th Vic., cap. 47, and 20th and 21st Vic., cap. 14, whereby the liability of the shareholders is limited to the amount subscribed.

Capital £100,000, in 50,000 shares of £2 each, with power to increase.

Deposit, 5s. per share on application, 1s. per share on allotment.

DIRECTORS.
The Hon. F. HENRY F. BERKELEY, M.P., Bristol; Victoria-square, Pimlico, S.W. (Chairman).

A. P. CLAYTON, Esq., Seven Oaks, Kent.

SIR JAMES DOMBRAIN, K.B., Dublin.

ROBERT FORD, Esq. (Messrs. Ford and Jackson), London and Milford Haven (Milford Haven, Cork, and Waterford Royal Mail Steam Packet Company).

The Lord GEORGE HILL, Ballyhale, Ramelton, Ireland.

Capt. H. J. JORDAN, The Beaumonts, Chertsey.

Sir CHARLES KIRKPATRICK, Bart., of Closburn, Dumfriesshire.

General T. E. M. MASON, Brompton, S.W.

JAMES PROTHEROE, Esq., Merchant, Bristol.

SYLVANUS PADLEY, Esq., J.P., Colliery Proprietor, Swansea.

T. W. RANKIN, Esq. (Director of the Bristol and South Wales Union Railway Company), Bristol.

WILLIAM DAVIES STEPHENS, Esq. (Messrs. Laing and Stephens), Steam Ship Owners, Newcastle-on-Tyne.

BANKERS.
Bristol and West of England .. Messrs. Stuckey's Banking Company.

London The City Bank.

SOLICITORS.
London..... Thomas J. Stubbs, Esq., 46, Moorgate-street, City.

Bristol..... Alfred Henderson, Esq.

Cardiff..... Clement Waldron, Esq.

Swansea..... Richard A. Esary, Esq.

BROKERS.
London..... Messrs. Froom Brothers, Change-alley, Cornhill.

Bristol..... A. F. Morcom, Esq.

Manchester..... J. Gorton, Esq.

Dublin..... Messrs. J. and J. Stevens.

Belfast..... Messrs. Orr and Co.

CONSULTING ANALYTICAL CHEMIST.

William Herapath, Esq., F.C.S., Professor of Chemistry, Bristol.

CONSULTING MINING ENGINEER FOR WEST OF ENGLAND AND SOUTH WALES DISTRICTS.

Alexander Bassett, Esq., C.E., Cardiff.

ENGINEER—Mr. J. D. Humphreys.

SECRETARY—Mr. W. Baldock.

OFFICES,—14 AND 15, ST. SWITHIN'S LANE, LONDON, E.C.

ABRIDGED PROSPECTUS.

(For full prospectus, see *Mining Journal* of the 13th inst.)

The object of this company is to carry out the process of compressing small coal into blocks, without the admixture of extraneous cohesive matter; for this purpose the exclusive use of several valuable patents has been secured on very favourable terms.

By this process the immense quantity of black or small coal annually wasted is rendered not only equal, but in several important points superior, to the best ordinary coal or any artificial fuel at present manufactured.

The principal advantages possessed by the compressed coal, are:—

1.—It is a purified coal, consisting of those particles which are known to be the best divested of much of that property which in raw coal produces smoke, and escaping without being consumed, carries off a considerable portion of the carbon, preventing its combustion, consequently reducing the heating power, and creating a great and unnecessary nuisance. It is also freed from the stony portions, which, when melted, produce clinkers.

2.—It takes up less space than raw coal; its specific gravity being about 1·160, i.e., containing 72 lbs. a cubic foot, a density which may be increased if required.

3.—It can be made into blocks of a size and shape convenient for stowage and all uses, not requiring to be broken, also of a rectangular form for stowage, at a small expense.

4.—It is less brittle than raw coal, the cleavage being destroyed, and the particles brought into more immediate contact.

It is obvious from the above that the compressed coal recommends itself.

FOR DOMESTIC USES.—Freedom from smoke, dust, and impurities; while from its great cleanliness it can be placed in any part of the house.

It emits great heat, burning freely and brightly, and with less liability of being extinguished.

It can be made into blocks of all sizes, suitable for the drawing-room or kitchen.

FOR MARITIME PURPOSES AND FURNACES GENERALLY.—It occupies much less space than common fuel; and being divested of its impurities, does not waste, form clinkers, or make much smoke.

It emits intense heat; and, unlike anthracite coal, does not destroy the furnace bars.

It is free from all danger of spontaneous combustion, and is made into convenient sizes and shapes for stowage.

The saving in price at which it can be supplied is so important a desideratum, that it cannot fail, combined with its superior qualities, to bring it into general use, and the low rate for which it can be made must leave a large amount of profit to the shareholders.

Applications for shares may be addressed to the secretary, brokers, and solicitors of the company, and must be accompanied either by a remittance or a bankers receipt for the amount of £s. per share, on the number of shares applied for. Three months' notice of future calls will be given.

Detailed prospectuses and every information may be obtained on application at the offices of the company, and of the solicitors and brokers.

DODDS' IRON AND STEEL PATENT LICENSING COMPANY (LIMITED).

This company is PREPARED TO GRANT LICENSES on moderate terms for the USE of their PATENT FOR STEELING RAILS, POINTS, CROSSINGS, MACHINERY, and EVERY DESCRIPTION OF IRONWORK.

The process, which is exceedingly reasonable in cost, and gives the most extraordinary durability to the material, has been highly approved of by the following gentlemen, firms, and companies, several of whom have extensively adopted the valuable improvement:—

ROBERT STEPHENSON, Esq.

JOHN BOUNCE, Esq.

J. PERRING, Esq.

THOS. E. HARRISON, Esq.

THE GREAT INDIAN PENINSULA RAILWAY COMPANY.

THE NORTH-EASTERN RAILWAY COMPANY.

MESSRS. STEPHENSON AND CO.

THE EAST LANCASHIRE RAILWAY COMPANY.

THE GREAT NORTHERN RAILWAY COMPANY.

THE MIDLAND RAILWAY COMPANY.

THE METROPOLITAN RAILWAY COMPANY have ordered a large quantity of rails by this process.

The FOLLOWING FIRMS are PREPARED TO EXECUTE ORDERS under the company's patent:—

Messrs. S. BEALE AND CO., PARK GATE, ROTHERHAM.

Messrs. DODDS AND SON, ROTHERHAM.

Messrs. LOH, WILSON, AND BELL, NEWCASTLE-ON-TYNE.

THE EBREW VALE COMPANY, SOUTH WALES.

Messrs. LEVICK AND SIMPSON, NEWPORT, MONMOUTHSHIRE.

Messrs. LLOYD, FOSTERS, AND CO., WEDNESBURY.

THE ISCA FOUNDRY COMPANY, NEWPORT, MONMOUTHSHIRE.

Applications for Licenses can be made to R. COOKE, Esq., at the company's offices, No. 7, Saxe-lane, London, E.C., where also testimonials and other information may be obtained.

NICKEL AND COBALT REFINING, AND GERMAN SILVER WORKS, 16, OOZELL STREET NORTH, BIRMINGHAM.

STEPHEN BARKER begs to inform the Trade that he has the following articles for sale:—

REFINED METALLIC NICKEL. | OXIDE OF COBALT. | WIRE, &c.

REFINED METALLIC BISMUTH. | GERMAN SILVER—IN INGOTS, SHEET

NICKEL AND COBALT ORES PURCHASED.

BELL BROTHERS beg to intimate that, having become SOLE LICENSEES in the United Kingdom of PROF. DEVILLE'S METHOD OF PRODUCING PURE ALUMINUM, they are now in a POSITION TO SUPPLY, from their works here, both this metal and its compound with copper, known under the name of ALUMINIUM BRONZE.—Newcastle-on-Tyne, September, 1860.

PATENT SAFETY FUSE.—THE GREAT EXHIBITION PRIZE MEDAL was AWARDED to the MANUFACTURERS of the ORIGINAL SAFETY FUSE, BICKFORD, SMITH, DAVEY, and PRYOR, who beg to inform Merchants, Mine Agents, Railway Contractors, and all persons engaged in Blasting Operations, that, for the purpose of protecting the public in the use of a genuine article, the PATENT SAFETY FUSE has now a thread wrought into its centre, which, being patent right, infallibly distinguishes it from all imitations, and ensures the continuity of gunpowder.

This Fuse is protected by a Second Patent, is manufactured by greatly improved machinery, and may be had of any length and size, and adapted to every climate.

Address.—BICKFORD, SMITH, DAVEY, and PRYOR, Tuckingmill, Cornwall.

SAFETY FUSE.—MESSRS. WILLIAM BRUNTON AND CO. have great pleasure in informing their customers and friends, and the mining community, that they have RESUMED MANUFACTURING, at their PENHELLICK WORKS, POOL, near CAMBORNE, CORNWALL, and BRYMBO, near WREXHAM, MANUFACTURERS OF FUSE, of every size and length, as exhibited in the Great Exhibition of 1861, and supplied to the Royal Arsenal at Woolwich, the Arctic Expedition, and every part of the globe.

For the convenience of their customers and others in the North, W. BRUNTON and Co. have recently erected a branch manufacture at Brymbo, near Wrexham, where, as at Cornwall, they are at all times PREPARED TO EXECUTE UNLIMITED ORDERS FOR SUPPLYING FUSE upon warrant that it will prove equal to, if not better than, any to be procured elsewhere.

MESSRS. W. BRUNTON AND CO. have great pleasure

in informing their customers and friends, and the mining community, that they have RESUMED MANUFACTURING, at their PENHELLICK WORKS, POOL, near CAMBORNE, and are PREPARED as before to SUPPLY SAFETY FUSE of a

QUALITY WHICH CANNOT BE SURPASSED.

BRANCH WORKS, BRYMBO, NEAR WREXHAM.

DAVEY'S PATENT BLASTING POWDER, MANUFACTURED BY DAVEY BROTHERS AND CO., NANCEKUKE POWDER WORKS, TUCKINGMILL, CORNWALL.

This blasting powder possesses the following advantages over every other in use:—

Its COMBUSTION is SLOWER and MORE PERFECT when confined in the hole,

PRODUCES LESS SMOKE, is LESS DANGEROUS, and it generally BURSTS

MORE ROCK with a CHARGE OCCUPYING THE SAME SPACE, but WEIGHING

FROM TWENTY TO THIRTY PER CENT. LESS than other powder, EFFECTING an

IMPORTANT SAVING.

DAVEY BROTHERS and Co. beg to state that this powder is specially made for blasting,

and from its slow combustion is not adapted for projectiles. They would, therefore, caution consumers against the efforts of interested parties to put it to a fallacious trial, by firing a ball from a mortar, which is no test of its explosive force when confined.

In the Court of the Vice-Warden of the Stannaries.
Stannaries of Cornwall.

PAINTER V. MEDD AND ANOTHER.

IN RE WHEAL SICILY MINE.

TO BE SOLD, pursuant to an Order made in the above-mentioned Cause, and dated the 28th day of May last, BY PUBLIC AUCTION, at the Registrar's Office, Truro, on Wednesday, the 1st day of July inst., at Twelve o'clock noon precisely.

40 (1024th) SHARES of the defendant Edward Medd, Of and in the said MINE.

HODGE, HOCKIN, AND MARRACK, Plaintiff's Soleitors, Truro.

Dated Registrar's Office, Truro, July 15, 1861.

In the Court of the Vice-Warden of the Stannaries.
Stannaries of Cornwall.

IN the MATTER of the ST. AUBYN MINERAL COMPANY (LIMITED), and in the MATTER of the JOINT-STOCK COMPANIES ACTS, 1856 and 1857.—TO BE SOLD, by direction of the Official Liquidator of the above company, with the sanction of the said Court, BY PUBLIC AUCTION, to be held on Tuesday, the 23rd day of July inst., at Sealey's Hotel, Marston, at Four o'clock in the afternoon, subject to such conditions as shall be then and there produced, all that the INTEREST of the said COMPANY of and in a certain INDENTURE of LEASE or MINING SETT, dated the 29th day of September, 1860, for a term of 21 years thence next ensuing, by virtue of which the mining operations of the said company have for some time past been carried on.

The mines may be inspected at any time prior to the sale, on application to the bailiff in charge thereof.

Further particulars may be obtained at the office of Mr. FREDERIC MARSHALL, the Official Liquidator of the said company in Truro; or on application to Messrs. HODGE, HOCKIN, and MARRACK, Solicitors, Truro (Agents for Messrs. Chaundler and Crouch, 8, Gray's Inn-square, London).—Dated Registrar's Office, Truro, July 18, 1861.

MINE MACHINERY, &c.

MR. HENRY WILLS WILL SELL, BY PUBLIC AUCTION, at and on BENEATHWOOD MINE, in the parish of Linkinhorne, in the county of Cornwall, on Tuesday, 30th July, 1861, the following MINE MACHINERY, &c., comprising a 16 in. ROTARY STEAM-ENGINE, with two boilers, 9 and 5 tons, drawing gear and iron cage attached, a good order and complete.

16 in. pumps.

20 in. matchings.

30 in. doors and doorpieces, clacks and seatings.

30 in. windbores.

39 in. workings.

7 in. pump.

7 in. matching.

16½ in. working.

7 in. doorpiece.

7 in. windbore.

9 in. pumps.

20 in. matchings.

1 door and doorpiece.

1 windbore.

7 in. working.

16½ in. working.

7 in. doorpiece.

7 in. windbore.

THE MINING JOURNAL.

BEDFORD IRONWORKS, TAVISTOCK.

NICHOLLS, WILLIAMS, AND CO. have generally a GOOD STOCK OF SECOND-HAND MINING MATERIALS FOR SALE, including ironwork for a water-wheel, 40 ft. diameter, 2½ ft. breast. They also MANUFACTURE STEAM ENGINES of every description on the newest principle. Castings and wrought-iron work made at the shortest notice. Machinery sent to all parts of the world. Steam boilers and chains warranted of the best description.

INCRUSTATION OF STEAM BOILERS.—EASTON'S PATENT BOILER FLUID EFFECTUALLY REMOVES AND PREVENTS INCRUSTATION IN STEAM BOILERS, WITHOUT INJURY TO THE METAL, WITH GREAT SAVING IN FUEL, AND WITH LESS LIABILITY TO ACCIDENT FROM EXPLOSION. It is used by Her Majesty's Steam Shores, Woolwich Arsenal, Honourable Corporation of Trinity House, Tower of London, India Store Department, by the principal Steam Packet Companies of London, Liverpool, Southampton, Hull, &c., and by engineers, builders, railway companies, and manufacturers throughout the country. Testimonials from eminent engineers, boiler makers, and manufacturers, with full particulars, will be forwarded on application to P. S. EASTON and G. SPRINGERFIELD, sole manufacturers and patentees, Nos. 37, 38, and 39, Wapping-wall, London, E.

AGENT IN GLASGOW:—

Aberdeen, Mr. James F. Wood.
Aston-under-Lyne, Mr. S. G. Fielden.
Belfast, Mr. W. T. Mattier, C.E.
Birmingham, Mr. Adam Dixon.
Chester, Mr. W. A. Rowland.
Devonport, Mr. Cornelius Boulds.
Dublin, Mr. P. Fith.
Farnham, Mr. W. B. Harvey, Chemist.
Glasgow, Mr. W. M. Murie.
Hartlepool, Mr. W. T. Cheeseman, West Hartlepool.
Hull, Messrs. A. L. Fleming and Co.

FOREIGN.
Rio de Janeiro, Messrs. Miers Brothers and Maylor, Engineers.
Odessa and South Russia, Mr. W. Baxter, Engineer, Nicolaef.

A STIER'S PATENT CHAIN PUMP, APPARATUS FOR RAISING WATER ECONOMICALLY, ESPECIALLY APPLICABLE TO ALL KINDS OF MINES, DRAINAGE, WELLS, &c. J. U. BASTIER begs to call the attention of proprietors of mines, engineers, architects, farmers, and the public in general, to his new pump, the cheapest and most efficient ever introduced to public notice. The principle of this new pump is simple and effective, and its action so arranged that accidental breakage is impossible. It occupies less space than any other kind of pump in use, does not interfere with the working of the shafts, and unites lightness with a degree of durability almost imperishable. By means of this hydraulic machine water can be raised economically from wells of any depth; it can be worked either by steam-engine or any other motive power, by quick or slow motion. The following statement presents some of the results obtained by this hydraulic machine, as fully demonstrated by use:—

1.—It utilises from 90 to 92 per cent. of the motive power.

2.—Its price and expense of installation is 75 per cent. less than the usual pumps employed for mining purposes.

3.—It occupies a very small space.

4.—It raises water from any depth with the same facility and economy.

5.—It raises with the water, and without the slightest injury to the apparatus sand mud, wood, stone, and every object of a smaller diameter than its tube.

6.—It is easily removed, and requires no cleaning or attention.

A mining pump can be seen daily at work, at Wheal Concord Mine, South Sydenham, Devon, near Tavistock; and a pumping pump at Woodsidge Graving Dock Company (Limited), Birkenhead, near Liverpool.

J. U. BASTIER, sole manufacturer, will CONTRACT TO ERECT his PATENT PUMP AT HIS OWN EXPENSE, and will GUARANTEE IT FOR ONE YEAR, or will GRANT LICENCES to manufacturers, mining proprietors and others, for the USE of his INVENTION.

OFFICES, 15, MANCHESTER BUILDINGS, WESTMINSTER, LONDON, E.C.

London, Oct. 10, 1859. Hours, from Ten till Four. J. U. BASTIER, C.E.

A USTRALIA AND NEW ZEALAND WHITE STAR EX-ROYAL MAIL CLIPPERS, SAILING FROM LIVERPOOL TO MELBOURNE on the 1st and 20th of every month.

* Passengers holding Victoria passage warrants will be forwarded to Melbourne by sea vessels.

For Register. Burthen. To sail. PRINCE OF THE SEAS.. Melbourne 1316 4000 July 20. COMMODORE PERRY .. Melbourne & Auckland 2016 6000 Aug. 20. BLUE JACKET .. Melbourne 1559 4750 Sept. 20. LORD RAGLAN .. Melbourne 1904 5500 Oct. 20.

The clippers of this line are the largest, finest, and handsomest in the trade, and are well known for their famous passages, and the unwavering punctuality of their sailing engagements. Passengers must embark, without fail, on the day previous to advertised date. For freight or passage apply to the owners, H. T. WILSON and CHAMBERS, 21, Water-street, Liverpool; or to GRINDLAY and Co., 124, Bishopsgate-street, and 55, Parliament-street; or SEYMOUR, PEACOCK, and Co., 116, Fenchurch-street, London.

Wiliot's Australian and New Zealand hand-books sent for two stamps.

TO BRASSFOUNDERS, ENGINEERS, REFINERS, &c.—

The PATENT PLUMBAGO CRUCIBLE COMPANY beg to CALL the ATTENTION of all users and shippers of melting pots to the GREAT SUPERIORITY of the PATENT CRUCIBLES, which

have been used during the last three years by some of the largest metallers in England and abroad. In addition to their capabilities of melting an average of from 35 to 40 pounds, they are unaffected by change of temperature, never crack, but can be used till worn out, requiring only one annealing for several days' work, and become heated much more rapidly than ordinary pots, EFFECTING thereby a SAVING of more than FIFTY PER CENT. in time, labour, fuel, and waste. The Patent Plumbago Crucible Company also manufacture and import clay crucibles, muffles, portable furnaces, sublimate pans and covers, glass pots, all descriptions of fire-standing goods, and every requisite for the assayer and dentist.

Also, sole proprietors of fine POWDERED PURE FLOUR PLUMBAGO, which they can confidently recommend for anti-friction purposes, being an impulsive powder, and warranted perfectly free from grit and any impurity. For ordinary polishing purposes it will be found superior to any of the black leads offered. Price, £27 10s. per ton; 30s. per cwt. Samples of 28 lbs. forwarded on receipt of 8s. Packages free.

For Lists, Testimonials, &c., apply to the BATTERSEA WORKS, London, S.W.

INVESTMENTS IN BRITISH MINES.—

Mr. MURCHISON publishes a QUARTERLY REVIEW OF BRITISH MINING giving at the same time the POSITION and PROSPECTS of the MINES at the end of each Quarter, the DIVIDENDS PAID, &c.; price One Shilling. RELIABLE INFORMATION AND ADVICE will at any time be given by Mr. MURCHISON, either personally or by letter, at his Offices, No. 117, BISHOPSGATE-STREET WITHIN, LONDON, where copies of the above publication can be obtained.

OPINIONS OF THE PRESS ON MR. MURCHISON'S WORK ON BRITISH MINING, PUBLISHED IN 1858.

Mr. Murchison's new work on British Mines is attracting a great deal of attention, and is considered a very useful publication, and calculated to considerably improve the position of home mine investments.—*Mining Journal*.

The book will be found extremely valuable.—*Observer*.

A valuable guide to Investors.—*Herapath*.

Mr. Murchison takes sound views upon the important subject of his book, and has placed, for a small sum, within the reach of all persons contemplating making investments in mining shares that information which should prevent rash speculation and unproductive outlay of capital in mines.—*Morning Herald*.

A valuable little book.—*Globe*.

Of special interest to persons having capital employed, or who may be desirous of investing in mines.—*Morning Chronicle*.

As a guide for the investment of capital in mining operations is inestimable. One of the most valuable mining publications which has come under our notice, and contains more information than any other on the subject of which it treats.—*Derby Telegraph*.

Parties requiring information on mining investments will find no better and safer information than Mr. Murchison.—*Leeds Times*.

To those who wish to invest capital in British Mines, this work is of the first importance.—*Welsman*.

This is really a practical work for the capitalist.—*Stockport Advertiser*.

This work enables the capitalist to invest on sound principles; in truth, it is an excellent guide.—*Plymouth Journal*.

All who have invested, or intend to invest, in mines, would do well to consult this very useful work.—*Ipswich Express*.

Persons desirous to invest their capital in mining speculations, will find this work a very useful guide.—*Warwick Advertiser*.

We believe a more useful publication, or one more to be depended on, cannot be found.—*Plymouth Herald*.

Those interested in mining affairs, or who are desirous of becoming speculators should obtain and carefully peruse the work.—*Monmouth Beacon*.

With such a work in print, it would be gross neglect in an investor not to consult it before laying out his capital.—*Poole Herald*.

Every person connected, or who thinks of connecting himself, with mining speculations should possess himself of this book.—*North Wales Chronicle*.

A very valuable book.—*Cornwall Gazette*.

All who have invested, or intend to invest, in mines, should peruse this able work.

Is deserving the attention of every one who seeks profitable investment of his capital.—*Glasgow Examiner*.

It is full of carefully compiled and reliable information relative to all the known mines of the United Kingdom.—*Sheffield Free Press*.

THE NEWCASTLE CHRONICLE AND NORTHERN COUNTIES ADVERTISER. (ESTABLISHED 1764).

PUBLISHED every Saturday, price 2d., or quarterly 2s. 2d.

THE DAILY CHRONICLE AND NORTHERN COUNTIES ADVERTISER.

PUBLISHED every morning, price 1d.

The best medium for mining, manufacturing, shipping, and trading advertisements in the North of England.

Office, 42, Grey-street, Newcastle-upon-Tyne; 50, Howard-street, North Shields; 195, High-street, Sunderland.

A BOOK TO NERVOUS SUFFERERS.

Twenty THOUSAND COPIES OF A MEDICAL BOOK for gratuitous circulation. HENRY SMITH, Doctor of Medicine of the Royal University of Jesus, &c., who has devoted 15 years to the study and Treatment of Nervous Disease, Loss of Memory, and Indigestion, will send free, for the benefit of Nervous Sufferers, a copy of the NEW MEDICAL GUIDE, containing his highly successful mode of treatment, with necessary instructions by which sufferers may obtain a cure. Post free on receipt of a stamped directed envelope, from the author's residence, 8, Barton-square, Tavistock-square, London, W.C.

RAILWAY WAGONS.—WILLIAM A. ADAMS AND CO., MIDLAND WORKS, BIRMINGHAM. BROAD AND NARROW GAUGE COAL AND IRONSTONE WAGONS. IN STOCK—FOR SALE OR HIRE.

THE RAILWAY CARRIAGE COMPANY, OLD BURY, NEAR BIRMINGHAM. MANUFACTURERS OF EVERY DESCRIPTION OF RAILWAY PLANT AND NEW AND SECOND-HAND RAILWAY WAGONS ALWAYS IN STOCK FOR SALE OR HIRE. LONDON OFFICES, No. 1, MOORGATE.

THE BIRMINGHAM WAGON COMPANY (LIMITED) HAS RAILWAY WAGONS FOR HIRE. Apply to the SECRETARY, 3, NEWHALL-STREET, BIRMINGHAM.

NORTH CENTRAL WAGON COMPANY, ROTHERHAM. RAILWAY WAGONS TO BE LET. Applications to be made to Mr. BARROWS, Secretary, North Central Wagon Company, HOWARD-STREET, ROTHERHAM.

JAMES RUSSELL AND SONS, CROWN TUBE WORKS, WEDNESBURY, STAFFORDSHIRE. WAREHOUSE, 81, UPPER GROUND STREET, BLACKFRIARS, LONDON, S. The Original Inventors and First Manufacturers of the Patent Wrought-Iron Tubes for Gas, Steam, Water, &c. Enamelled Tubing, and Glazed ditto. Russell and Howell's Homogeneous Tubes. And agents for G. F. Munz's Solid Brass Tubes. Every variety of fittings. Trade mark.

LOYD AND LLOYD, ALBION TUBE WORKS, BIRMINGHAM. MANUFACTURERS OF PATENT LAP-WELDED IRON TUBES, FOR LOCOMOTIVE, MARINE, AND STATIONARY BOILERS. IMPROVED HOMOGENEOUS METAL TUBES. ALL DESCRIPTIONS OF TUBES AND FITTINGS FOR GAS, STEAM AND WATER, PLAIN, GALVANISED AND ENAMELED. GUN-METAL STEAM GLAND COCKS, WATER GAUGES, &c.

SHORTRIDGE, HOWELL, AND CO., HARTFORD STEEL WORKS, SHEFFIELD, SOLE MANUFACTURERS OF HOWELL'S PATENT HOMOGENEOUS METAL PLATES FOR BOILERS, LOCOMOTIVE FIRE BOXES, and TUBES, COMBINING THE STRENGTH OF STEEL with the MALLEABILITY of COPPER. RUSSELL AND HOWELL'S PATENT CAST STEEL TUBES. McCONNELL'S PATENT HOLLOW RAILWAY AXLES.—For prices and terms, apply to SHORTRIDGE, HOWELL, and CO., Hartford Steel Works, Sheffield; or Messrs. HARVEY and CO., 12, Haymarket, London.

FARRAR'S PATENT STEEL COMPANY, WARDSEND STEEL WORKS, SHEFFIELD, MANUFACTURERS OF BEST CAST STEEL, MALLEABLE and MILD STEEL CASTINGS, SUPERIOR CAST-STEEL FILES, &c. CALL THE ATTENTION of ENGINEERS and all users of FIRST-CLASS STEEL to the GREAT SUPERIORITY of STEEL MANUFACTURED under this PATENT. Prices:—

First quality £50 per ton.

Second quality 40 "

Third quality 30 "

Fourth quality 20 "

Fifth quality 18 "

Sixth quality 16 "

Seventh quality 14 "

Eighth quality 12 "

Ninth quality 10 "

Tenth quality 8 "

Eleventh quality 6 "

Twelfth quality 4 "

Thirteenth quality 2 "

Fourteenth quality 1 "

Fifteenth quality 1 "

Sixteenth quality 1 "

Seventeenth quality 1 "

Eighteenth quality 1 "

Nineteenth quality 1 "

Twentieth quality 1 "

Twenty-first quality 1 "

Twenty-second quality 1 "

Twenty-third quality 1 "

Twenty-fourth quality 1 "

Twenty-fifth quality 1 "

Twenty-sixth quality 1 "

Twenty-seventh quality 1 "

Twenty-eighth quality 1 "

Twenty-ninth quality 1 "

Thirtieth quality 1 "

THE MINING SHARE LIST.

DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Business.	Dividends Per Share.	Last Paid.
4000 Bedford United (copper), Tavistock ..	2 6 8 ..	5 ..	4% 5 ..	.. 12 7 0 .. 0 3 6—June, 1861	..	
240 Boscan (tin), St. Just ..	20 10 0 ..	50 ..	.. 33 0 .. 1 10 0—May,	..	..
200 Botallack (tin, copper), St. Just ..	91 5 0 ..	190 ..	.. 445 3 .. 2 10 0—Feb,	..	..
200 Brynfall Hall (lead), Flintshire ..	12 10 0 ..	26 ..	.. 14 0 .. 2 2 10 0—Oct,	..	..
1000 Carn Brea (copper, tin), Illogan ..	15 0 0 ..	65 70 ..	.. 269 16 0 .. 2 0 0—Feb,	..	..
2048 Carnyorth (tin), St. Just ..	3 10 0 ..	13% ..	.. 19 8 .. 0 2 0—Sept, 1861	..	..
200 Cefn Brynwy (lead), Cardiganshire ..	33 0 0 ..	35 ..	.. 9 0 .. 0 4 0—April, 1861	..	..
8000 Commerore (copper, sulphur) [L. £1] ..	1 0 0 ..	34 ..	.. 0 9 0 .. 0 9 0—July, 1860	..	..
2400 Cook's Kitchen (copper), Illogan ..	17 0 0 ..	37 29 ..	.. 0 8 0 .. 0 8 0—May, 1861	..	..
12000 Copper Miners of England ..	25 0 0 ..	25 ..	.. 7% per cent. —Half-yrly,	..	..
\$3000 Ditto (stock) ..	100 0 0 ..	34 ..	.. 1 per cent. —Half-yrly,	..	..
1055 Craddock Moor (copper), St. Cleer ..	8 0 0 ..	26 ..	.. 5 8 0 .. 0 5 0—May, 1861	..	..
867 Cwm Efn (lead), Cardiganshire ..	7 10 0 ..	16% ..	.. 5 8 0 .. 1 0 0—June, 1861	..	..
128 Cwmystwyth (lead), Cardiganshire* ..	60 0 0 ..	240 ..	.. 227 10 0 .. 5 0 0—May,	..	..
280 Derwent Mines (sil.-lead), Durham ..	300 0 0 ..	180 ..	.. 142 0 .. 5 0 0—June, 1861	..	..
1224 Devon Gt. Con. (cop.), Tavist.* [S.E.] ..	1 0 0 ..	355 ..	.. 345 355 .. 753 0 .. 7 0 0—May,	..	..
858 Dolcoath (copper, tin), Camborne* ..	128 17 6 ..	510 ..	.. 626 10 0 .. 8 0 0—June, 1861	..	..
612 East Bassett (cop.), Redruth* [S.E.] ..	29 10 0 ..	86 ..	.. 82 0 .. 0 5 0 0—May,	..	..
614 East Caradon (copper), St. Cleer [S.E.] ..	2 14 6 ..	22% ..	.. 17 6 0 .. 10 0—July, 1861	..	..
300 East Darren (lead), Cardiganshire* ..	32 0 0 ..	67 ..	.. 75 10 0 .. 1 0 0—April, 1861	..	..
2048 East Wheal Lovell (tin), Wendron ..	2 10 0 ..	— ..	.. 5 0 0 .. 0 5 0—July, 1859	..	..
1400 Eyan Mining Co. (lead), Derbyshire ..	5 0 0 ..	— ..	.. 20 3 4 .. 0 10 0—May,	..	..
4940 Fowey Consols (copper), Tywardreath ..	4 0 0 ..	5 ..	.. 41 9 3 .. 0 2 6—June, 1860	..	..
2460 Fordale, Isle of Man, Limited (lead)* ..	25 0 0 ..	35 ..	.. 61 8 3 .. 1 0 0—Dec,	..	..
5000 Frank Mills (lead), Devon ..	3 18 6 ..	4% ..	.. 0 11 0 .. 0 3 0—July, 1861	..	..
6000 Great South Tolgus [S.E.], Redruth* ..	0 14 6 ..	2% ..	.. 7 13 6 .. 0 5 0—Feb,	..	..
1798 Great Wheal Fortune, Breage ..	6 16 ..	12 ..	.. 0 10 0 .. 0 10 0—Mar,	..	..
5908 Great Wh. Vor (tin, cop.), Helston [S.E.] ..	40 0 0 ..	6 ..	.. 0 5 0 .. 0 5 0—Mar,	..	..
1024 Herodsfoot (tin), near Liskeard [S.E.] ..	8 10 0 ..	40 ..	.. 39 40 .. 14 10 0 .. 2 0 0—June, 1861	..	..
1000 Hibernian Mine Company ..	93 6 2 ..	— ..	.. 6 15 0 .. 0 15 0—Feb,	..	..
160 Levant (copper, tin), St. Just ..	2 10 0 ..	95 ..	.. 1091 0 .. 0 5 0 0—May,	..	..
400 Llunlun (lead), Cardiganshire, Wales* ..	18 15 0 ..	125 ..	.. 373 10 0 .. 3 0 0—June,	..	..
9000 Marke Valley (copper), Caradon ..	4 10 6 ..	9% ..	.. 1 1 0 .. 0 0 5 0—July,	..	..
8666 Mendip Hills (lead) [L.], Somerset ..	3 15 0 ..	1% ..	.. 2 1 0 .. 0 2 6—May,	..	..
18000 Minera Mining Co. [L.], (d.), Wrexham ..	26 0 0 ..	180 ..	.. 71 9 0 .. 4 5 0—May,	..	..
20000 Mining Co. (cop., lead), Mold ..	7 0 0 ..	14% ..	.. 14 7 1 0 .. 0 5 0—June, 1861	..	..
640 Mount Pleasant, Mold ..	4 0 0 ..	25 ..	.. 12 15 7 .. 1 0 0—Mar,	..	..
6000 New Birth Tor and Vitifer Consols ..	1 6 6 ..	2 ..	.. 1 2 0 6 .. 0 2 6—May,	..	..
1886 North Grambler, Redruth ..	2 7 6 ..	6% ..	.. 10 0 0 .. 0 10 0—Mar,	..	..
6000 North Great Work, Breage ..	1 3 0 ..	4% ..	.. 0 2 0 .. 0 2 0—May,	..	..
8000 Osred (lead), Flintshire ..	0 0 8 ..	1% ..	.. 0 6 6 .. 0 9 0—Mar,	..	..
6400 Par Consols (cop.), St. Blazey [S.E.] ..	1 2 6 ..	10 ..	.. 8 9 .. 36 4 .. 6 0 .. 5 0—July,	..	..
200 Parys Mines (copper), Anglesey [L.] ..	50 0 0 ..	— ..	.. 5 0 0 .. 0 5 0—Jan,	..	..
200 Phoenix (copper, tin), Linkinhorne ..	100 0 ..	435 ..	.. 449 10 0 .. 55 0—May,	..	..
1772 Polberro (tin), St. Agnes ..	— ..	5 ..	.. 8 9 6 .. 0 15 0—April, 1861	..	..
1120 Providence (tin), Uly Lelant [S.E.] ..	10 6 7 ..	31 ..	.. 31 33 .. 85 15 0 .. 1 0 0—May,	..	..
16 Rhosessor ..	50 0 0 ..	— ..	.. 1250 0 .. 0 100 0—May,	..	..
813 South Caradon (cop.), St. Cleer [S.E.] ..	1 8 0 ..	305 ..	.. 346 0 .. 0 5 0 0—May,	..	..
813 South Tolgus (cop.), Redruth, Cornwall* ..	0 0 0 ..	40 ..	.. 103 10 0 .. 1 0 0—June,	..	..
8000 South Wheal Frances, Illogan* [S.E.] ..	18 18 9 ..	13% ..	.. 355 8 .. 1 0 0—July,	..	..
280 Spears Moor (tin, copper), St. Just ..	31 17 9 ..	45 ..	.. 9 15 0 .. 1 0 0—June,	..	..
940 St. Ives Consols (tin), St. Ivest ..	8 0 0 ..	32% ..	.. 28 30 .. 484 0 .. 0 5 0—May,	..	..
9400 Tamor Con. (sil.-lead), Beerston [S.E.] ..	4 10 0 ..	13% ..	.. 5 6 0 .. 0 2 6—Jan,	..	..
6000 Tineroft (cop., tin), Pool, Illogan [S.E.] ..	9 0 0 ..	5% ..	.. 10 8 6 .. 0 5 0—Feb,	..	..
6000 Tolvadden (copper), Marazion ..	— ..	2% ..	.. 13 12 6 .. 0 3 0—Mar,	..	..
873 Trelyn Consols (tin), St. Ives ..	11 10 0 ..	14 ..	.. 10 12% .. 7 0 .. 0 0 0—10 0—Sept,	..	..
200 Trumpet Consols (tin), near Helston ..	57 10 0 ..	100 ..	.. 52 0 .. 0 2 0 0—May,	..	..
1024 Wendron Consols (tin), Wendron ..	11 13 10 ..	16 ..	.. 8 15 0 .. 1 0 0—Jan,	..	..
8000 West Bassett (copper), Illogan [S.E.] ..	1 10 0 ..	19% ..	.. 21 10 0 .. 0 8 0—May,	..	..
60 West Burhill Gill (lead), Yorkshire ..	50 0 0 ..	— ..	.. 14 10 0 .. 0 3 0—June, 1861	..	..
1024 West Caradon (cop.), Liskeard [S.E.] ..	5 0 0 ..	44 ..	.. 45 47 .. 91 11 3 .. 2 0 0—May,	..	..
256 West Damself (copper), Gwennap ..	37 0 0 ..	55 ..	.. 45 0 .. 0 1 0—May,	..	..
6400 West Fowey Consols (tin and copper) ..	7 10 0 ..	5 ..	.. 14 0 0 .. 0 2 0—May,	..	..
400 W. Wh. Seton (cop.), Camborne* [L.] ..	47 10 0 ..	310 ..	.. 308 0 .. 0 10 0—June,	..	..
512 Wheal Bassett (copper), Illogan* [S.E.] ..	5 2 6 ..	92% ..	.. 570 10 0 .. 2 0 0—June,	..	..
256 Wheal Bull (copper), Redruth* [S.E.] ..	5 0 0 ..	105 ..	.. 929 0 .. 0 2 0 0—May,	..	..
800 Wheal Clifford (cop.), Gwennap [S.E.] ..	— ..	182 ..	.. 160 170 .. 89 10 0 .. 5 0—April,	..	..
2000 Wheal Falmouth and Spotties ..	2 5 0 ..	8 ..	.. 10 0 0 .. 0 10 0—Feb,	..	..
128 Wheal Friendship (copper), Devon ..	50 0 0 ..	90 ..	.. 2400 10 0 .. 5 0 0—Feb,	..	..
256 Wheal Jane (silver-lead), Kew ..	3 10 0 ..	18 ..	.. 10 10 0 .. 1 0 0—Feb,	..	..
1094 Wheal Kitty (tin), Uly Lelant [S.E.] ..	1 7 2 ..	11 ..	.. 8 0 0 .. 0 10 0—Sept,	..	..
4800 Wheal Ludcott (lead), St. Ives ..	2 10 0 ..	3% ..	.. 1 2 0 8 .. 3 2 5% .. 2 0 8 .. 0 4 0—July,	..	..
896 Wh. Margret (tin), Uly Lel. [S.E.] ..	9 17 6 ..	45 ..	.. 68 0 .. 0 1 1 0 0—May,	..	..
100 Wheal Mary Ann (tin), Liskeard [S.E.] ..	36 2 6 ..	440 ..	.. 280 5 .. 0 7 0—June, 1860	..	..
1024 Wheal Mary Ann (d.), Menheniot [S.E.] ..	8 0 0 ..	10 ..	.. 53 17 6 .. 0 10 0—June,	..	..
80 Wheal Owles, St. Just, Cornwall ..	70 0 0 ..	300 ..	.. 275 13 0 .. 5 0 0—May,	..	..
5000 Wicklow (copper) [L.] ..	6 0 0 ..	53 ..	.. 573 58 .. 41 17 6 .. 2 12 6—2 12 6—March, 1861	..	..

[* Dividends paid every two months. † Dividends paid every three months.]

MINES WITH DIVIDENDS IN ABEYANCE.

700 Aberdovey (silver-lead), Merioneth ..	1 10 0 ..	30 ..	.. 0 10 0 .. 0 10 0—Mar, 1859	..	..
5120 Alfred Consols (cop.), Phillack [S.E.] ..	2 17 1 ..	1% ..	.. 20 3 0 .. 0 2 6—April, 1859	..	..
1824 Ballawidden (tin), St. Just ..	15 5 0 ..	12 ..	.. 12 5 0 .. 0 5 0—Jan, 1854	..	..
1200 Brightside & Froggatt Grove, Derbysh. ..	3 0 0 ..					